A qualitative case study of joint media engagement between parents and children aged birth-to-three years in Nairobi County in Kenya

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Statement of Authorship and Sources

This thesis contains no material that has been extracted in whole or in part from a thesis that I have submitted towards the award of any other degree or diploma in any other tertiary institution. No other person's work has been used without due acknowledgment in the main text of the thesis.

All research procedures reported in the thesis received the approval of the relevant Ethics/Safety Committees (Ethics Register Number: 2017-5H).

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Dedication

To my mother, Eunice Khakasa

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Abstract

This thesis details a ground-breaking study of joint media engagement between parents and children aged birth-to-three years in their home settings in Nairobi County in Kenya. It describes and attempts to theorise the social and communicative features of parents and young children using digital media together in the context of family interpersonal interaction and communication. In the pursuit of understanding and theorising the social and communicative features of joint media engagement, I consider the central role of sociality in human learning by locating digital media in routines and practices of everyday life and examine the actions and interactions that occur with, around and through various digital media platforms in families. The importance of digital media in culture and society cannot be neglected because they are involved in every aspect of young children's lives. A growing body of research suggests young children under the age of three living in homes increasingly saturated with digital media, use this technology. This implies that we must consider the role that digital media plays to grasp an understanding of the everyday life experiences of young children in post-industrial society.

Young children's access and use of digital media have and continue to evoke public anxieties about the perceived digital media effects on optimal cognitive, social, language and emotional development. In part, these widespread anxieties exist because we have limited understanding of how young children use digital media in the context of everyday family relationships and experiences. In response to these concerns, researchers have initiated investigations over the past nine years collecting data in both formal and informal settings suggesting that joint media engagement may mitigate the perceived effects of digital media and foster positive developmental outcomes in young children. However, the aspects of joint media engagement which may mitigate the effects of digital media while fostering play and learning are largely unknown and undertheorised. There is an urgent need to understand the aspects or features of joint media engagement so that we are better placed to mobilise digital media for learning in homes.

For its theoretical framework, the study anchored in socio-contextual perspectives of human learning, mostly applying cultural-historical and socioecological theories that use 'mediated actions' or 'agents-acting-with-mediational means' in context as a focal unit of analysis to

examine psychosocial developmental processes. The study utilised data generated by the ethnographic method of video observations in eight selected families in Nairobi County in Kenya. In terms of analysis, interactional analysis was used to identify the social and communicative features of joint parent-child dyadic engagement with digital media as cultural tools.

Through the iterative microanalysis of selected video episodes of joint media engagement, four social and communicative features were identified as instantiated in joint media engagement between parents and young children in the observed families. The four social and communicative features include: physical proximity of participants, reciprocal communication between the participants, mutual visual gaze to digital media activities on screen, and sharing a common interest in digital media activities. The thesis argues that the four social and communicative features engendered in joint media engagement reflect the warm, embodied, and affective ways through which digital media used as mediational means or cultural tools fulfil the interactional purposes of parents and their children in the context of family relationships and socialisation. I further argue that the social and communicative features identified in joint media engagement may be the focal concerns of parents when they are helping young children to navigate through the complex media environment at home. Based on the four social and communicative features that constitute joint media engagement, I hypothesise two psychosocial developmental processes and argue that they may represent the primary mechanisms through which young children may learn while using digital media together with their parents at home. I offer nuanced claims which conceive joint media engagement as a site or potential space where parents can identify and *extend* or *amplify* the emerging social and communicative competencies displayed by young children.

CHAPTER ONE: SETTING THE SCENE

1.1 Introduction

This study researches joint media engagement between parents and young children in the context of parent-child dyadic interactions in the home setting. Specifically, the thesis describes the social and communicative features, engendered in joint media engagement, and, attempts to theorise, what those features potentially "tell us about the forms of learning … that are already instantiated" Duncan and Hayes (2012, p. 3) in and around joint use of digital media in the context of family interpersonal interaction and communication (Adamson, Bakeman, Deckner, & Nelson, 2014; Connell, Lauricella, & Wartella, 2015; Goodman, 1983; Lauricella, Wartella, & Rideout, 2015; Leichter et al., 1985; Lull, 1990; Marsh, Hannon, Lewis, & Ritchie, 2015; Morley, 1988; Pempek & Lauricella, 2017; Plowman & Stephen, 2007; Plowman & Stephen, 2013; Plowman, Stephen, & McPake, 2010b; Stoneman & Brody, 1982).

There is a plethora of empirical evidence suggesting that young children under the age of three are accessing and using digital media every day (Palaiologou, 2016), at least in developed countries (Marsh, 2015). As Silverstone (1999) observes, for young children and families broadly, "digital media has become part of the general texture of experience" (p. 2). Gergen (2010) pursued a similar line of argument when he observed that digital media especially mobile digital media such as smartphones and tablets is "subtly insinuating itself into the capillaries of every-day interchange, altering our forms of life, and bringing about new possibilities in its wake" (p. 14). In this context digital media "does not merely relate to entertainment that is optional" for children and young people (Livingstone, 2010, p. 33), instead, it becomes part and parcel of their everyday experiencing (Gergen, 2010; Silverstone, 1999). Children and young people today construct and view their world with, around and through digital media. The increasing proportion of young children using digital media heightens the need for understanding the ways adults can promote healthy development when helping young children use digital media (Edwards, 2013; Gee, Takeuchi, & Wartella, 2018; Marsh, 2018; Plowman, 2013; Plowman, McPake, & Stephen, 2010; Plowman & Stephen, 2007; Plowman & Stephen, 2013; Stephen & Plowman, 2014; Takeuchi & Stevens, 2011). Despite these research efforts, we know very little particularly from developing countries about the digital media activities and practices of children under the age of three and the social partners with whom they interact with

while using digital media. What is certain even in the absence of statistics of digital media presence in homes in developing countries, young children are using digital media (Buckingham & Jensen, 2012). The increasing proportion of young children using digital media not only in developed but also in developing economies intensifies the need for concerted research efforts to comprehend the dynamic and complex ways in which young people incorporate digital media into their everyday activities and relationships.

Consider this episode from a family home in Nairobi in Kenya:

> Jackie, a mother of three children - a twenty-six-month-old boy, a four-year-old girl and a teenage girl, curls up on a couch with a tablet held in her hands. Brian, the twenty-six-month-old boy plays with his sister Isabella (four-year-old) on the floor with building blocks. Brian stands up and walks to his mother and tries to take the tablet from her hands. The mother holds his right arm and pulls him closer to her body. She taps on a YouTube app. It opens. She searches and selects an animal clip and taps on it to play. She asks Brian to name the animal that has appeared on the screen. The animal in question is a Zebra. Without speaking, Brian gazes across the room—his gaze suggests he is looking for something. His mother asks him to show her the animal. They both stand up and walk toward a stand lying beside the television. Isabella joins them. On top of the stand are animal carvings, both domestic and wild. The mother tells Isabella not to tell him which of the animal carvings to pick. Brian picks the Zebra carving and shows it to his mother. "Good boy," she pats his back. She asks him to say the name of the animal. "Sebla," he vocalises. Isabella repeats, "Zebra" as she laughs. His mother asks him where he saw the Zebra, he vocalises. She tells me they had visited an animal zoo a couple of weeks ago and the Zebra is the only animal he recognises. (Source: Field notes July 2017)

That brief conversation between Brian and his mother lasted about 40 seconds. Digital media acted as a stimulus for the conversation between the mother and his son. The conversation links digital media texts to the young boy's experiences in real life. The mother connects digital media content to what the child has already encountered while conducting his everyday life in his surrounding environment. What is evident in the literature about young children's engagement with digital media in families is that they are exposed to multimodal

digital media literacies (Marsh et al., 2015). It is quite clear from the above example that digital media mediated or afforded the interaction between Brian and his mother (Erstad & Wertsch, 2008; Gibson & Pick, 2000; Gibson, 1979). The digital media appropriated into the interaction, was possibly not designed for that purpose, but the parent and the child used it for their own goals—to accomplish the everyday conversations that go on in families. Often dismissed as just another humdrum that happens in families, such incidents, among other types of ephemeral family interpersonal interactions involving digital media and associated texts occur regularly. Ephemeral interactions such as these deserve a closer examination if we are keen to understand how digital media has infiltrated into the capillaries of family life and become interwoven in the everyday experiences of young children. It is within these everyday experiences involving material objects such as digital media, that we find the 'extraordinary' (Silverman, 2013b) and exciting learning opportunities that digital media potentially make available to young children in homes and other informal settings (Davidson, 2009).

There have been sustained research efforts since the 1970s to understand the role that adults and particularly parents may play in mediating children's media experiences (Takeuchi & Stevens, 2011). In the past nine years, joint media engagement has trended as a research topic, in particular, when targeted at the relationship that exists between young children and digital media, in families and other informal settings (Lauricella, Blackwell, & Wartella, 2017), with joint media engagement, often prized as an effective strategy for mitigating the perceived negative effects of digital media on young children's development (Levine, Takeuchi, & Vaala, 2014; Mehus & Stevens, 2011; Takeuchi, 2014; Takeuchi & Stevens, 2011). There is a dearth of research evidence about the vital role of adults in children's learning in general such as studies in the area of shared book-reading (Morgan, 2005) and co-viewing (Clark, 2011; Clark, 2012b; Warren, 2003, 2005). Both of these studies reported that parents use some strategies such as summoning children's attention to specific aspects of what is being read or viewed, as well as asking questions about the content of media (Morgan, 2005; Warren, 2005). These strategies, among others used by parents when using digital media together with young children, have shown to contribute to aiding children's comprehension of media content (Clark, 2011; Valkenburg, Krcmar, Peeters, & Marseille, 1999; Warren, 2005). Joint media engagement researchers draw their inspiration from active learning, sustained shared thinking, joint involvement episodes, shared book-reading, and co-viewing studies by considering the effects

of people using digital media together (Stevens & Penuel, 2010). However, little is known about the social and communicative features and the possible mechanisms that may account for *productive* learning in joint media engagement (Takeuchi & Stevens, 2011).

One of the most fruitful ways of understanding how young children learn is to examine their everyday activities and practices in context (Tudge, 2008; Tudge, Brown, & Freitas, 2011; Tudge & Hogan, 2005). Notably, researchers looking at young children's digital media activities and practices in context, have sought to comprehend the digital media activities and practices in preschools (Arnott, 2016; Palaiologou, 2016). Previous research carried out in homes also paid attention to digital media experiences of preschool-age children, leaving younger children disproportionately underrepresented in literature (Marsh et al., 2018; Nevski & Siibak, 2016). Research about joint media engagement particularly with the under threes is timely because as childhood becomes *mediatised* (Livingstone, 2009b), and the 'moral panic' discourse about the role of digital media in young children's lives intensifies (Buckingham, 2009b), policy recommendations call on parents and caregivers to use digital media jointly with their children (Connell et al., 2015). Such policy pronouncements, given impetus by a surfeit of socio-contextual research evidence suggest that young children learn primarily through authentic interactions with people (Bronfenbrenner, 2005), acting with symbolic elements within their historical and cultural conditions of existence (Erstad & Wertsch, 2008; Wertsch, 1991, 1994).

1.2 Background to the Study: Growing Up in Mediatised Families and Childhoods

I take as my starting point an analysis of the nature of the environment in which children are growing. Such an entry point to the analysis of children's lived experiences considers that the broader social and cultural conditions at a particular point in history shape the nature and types of activities and practices of children. To effectively analyse children's digital media practices or habits, it may be necessary to understand the kind of world in which children are living or will live in years to come (Buckingham, 2010; Livingstone, 2002, 2009a). Decades of research has revealed many forces that shape human learning and development from birth onward. Bronfenbrenner (1970) observed that from early in a child's life, the family initiates or mediates almost all the forces. Arthur (2005) recognises that the family plays a pivotal role in children's learning. The family is a fundamental, informal, learning environment particularly during the formative years (Livingstone, 2002; Siraj-Blatchford, Muttock, Sylva, Gilden, &

Bell, 2002; Siraj-Blatchford, Sammons, Sylva, Melhuish, & Taggart, 2006) with early home experiences strongly linked to academic achievement later in school, increased economic productivity in the labour market (Siraj-Blatchford et al., 2002), and general psychological well-being of individuals (Bronfenbrenner & Ceci, 1994). Bronfenbrenner (1970) a developmental psychologist concerned with how the society can 'make human beings human' contended that the family is an institution that bears the primary responsibility for the care and quality of the society (Bronfenbrenner, 1970). The family is the first social environment in which children experience and learn about their culture; digital media represents a part of that culture. It is within the family that children form the attitudes about life through primary socialisation (Berger & Luckmann, 1966).

However, we know that the family is not the only institution socialising children into the society in which they live. In the life course of development, children interact with a variety of agents of socialisation (Couldry & Hepp, 2017). Sociologists have identified many other institutions that shape the process of socialisation. For instance, apart from the family, Andersen and Taylor (2008) identified peer groups, religion, schools, the media and sports as implicated in the process of socialisation. Traditionally, each of these socialisation institutions was seen to have a distinct influence on young children (Krotz, 2009). It is no longer plausible in contemporary society to view each of the socialisation agents as influencing children on its own without considering the others (Andersen & Taylor, 2008; Couldry & Hepp, 2017; Krotz, 2009). There is no doubt that the family, peer group, school, sports, religion and media continue to play a significant role in the upbringing of children and young people (Couldry & Hepp, 2017). However, as Krotz (2009) argues, "the media have changed their role, as today none of the other institutions can be understood without taking the media into account" (p. 22). Digital media have become a significant part of children's experiences in families (Marsh, 2005, 2018; Marsh et al., 2015; Plowman, 2013, 2015, 2016; Plowman, Stephen, & McPake, 2010a). Krotz (2009) provides a succinct summary of the changing role of media in society:

> [f]amilies, peer groups, and schools as institutions are still the most important actors of socialization of children and young people today. Nevertheless, none of them can be understood without taking into account the role that the media plays. In other words, we should speak of new mediatized forms of socialization and of growing up in or into a

> mediatized society. We should speak of the mediatized institutions 'family' and 'school,' mediatized social relations, mediatized peer groups, and even mediatised media. (p. 22)

Explicit in Krotz's (2009) view as expressed in the quote is that digital media rather than being viewed as a separate institution influencing family as well as children's lived experiences from outside, they are implicit in the social organisation of everyday experiencing.

The social and cultural conditions in which children live and grow are changing rapidly (Livingstone, 2009a; Prout, 2005). The changing conditions of childhood are in part a result of the profound changes and transformations occurring in the media landscape (Hepp, Hjarvard, & Lundby, 2015; Krotz & Hepp, 2011; Livingstone, 2014). Given those changes and transformations in the media environment, understandings of other institutions such as families by necessity should consider the media. The changes occurring in the media environment means the basic social and cultural activities, as well as interpersonal relationships within families, will continue to be transformed in significant ways (Couldry & Hepp, 2017). However, this is not to imply a digital or technological deterministic view of technology changing or structuring family life. It would also be naïve to assume that digital media are neutral and do not exert any influence on social and cultural spheres of human life (Feenberg, 1991, 1999; Grimes & Feenberg, 2009, 2013). Indeed, digital media have their own structure and ideology (Buckingham & Sefton-Green, 2003) or what other researchers have referred to as 'media logic' (Couldry & Hepp, 2017; Hepp et al., 2015; Hjarvard, 2013, 2018; Krotz, 2009; Krotz & Hepp, 2011). Equally, naïve would be to argue that individuals, including young children, submit to the 'media logic' by consuming digital media passively. Previous research has shown that individuals are agentic in the process of digital media consumption (Buckingham & Sefton-Green, 2003) supporting the argument that the structure of digital media and the agency of individuals mutually shape each other (Buckingham & Sefton-Green, 2003). Extensive ethnographic studies have revealed that young children use digital media in creative and often thoughtful ways (see e.g. Houen, Danby, Farrell, & Thorpe, 2017; Plowman, 2015), learning, creating, and connecting with the world around them (Ito et al., 2010).

Young children become members of society when they actively participate in and are guided through valued sociocultural activities and practices (Rogoff, 1990). The question becomes, what kinds of activities does a society witnessing rapid changes and transformations in

the media environment value? Together with, what are the implications of these changes and transformations on existing activities and practices? Of course, cross-cultural research suggests that the value place on sociocultural activities vary widely from one community to another (Rogoff, 1995, 2003; Rogoff et al., 1993, 2015). However, through metaprocesses such as globalisation, many communities across the world embrace common activities though in varying degrees and intensities. Children today are born and raised in a society saturated with digital media devices. Policymakers continue to emphasise the need to equip citizens with the twenty-first-century skills necessary for knowledge economies. It is clear from studies such as those of Marsh et al. (2015), Jenkins (2006a, 2012), Alper (2011), Livingstone (2010), and (Buckingham, 2009b, 2010) that today, digital media literacy practices are valued sociocultural activities which children need initiation into from an early age.

Broadly, the family, as well as childhood, are undergoing major social and cultural transformations. The social and cultural transformations are, in part, a result of the mediatisation process (Hjarvard, 2013) where children's life worlds are described as mediatised spaces (Hepp et al., 2015; Hjarvard, 2004, 2013; Livingstone, 2014) with digital media deeply ingrained in the process of socialisation (Couldry & Hepp, 2017). Mediatisation has been conceptualised as a meta-historical process through which digital media increasingly penetrate all social and cultural aspects of everyday lives of institutions (Hepp et al., 2015; Hjarvard, 2004, 2008a, 2008b, 2013, 2018; Krotz, 2009; Krotz & Hepp, 2011). Mediatisation research considers that digital media have assumed a fundamental role in human social and cultural activities as well as well as in the way individuals relate to one another (Krotz, 2017). Sociologists have carried out detailed empirical work on mediatisation of various institutions such as religion, politics, and sports (Couldry & Hepp, 2017; Hepp et al., 2014; Krotz & Hepp, 2011). Studies of mediatisation spearheaded by Hjarvard (2004, 2008a) have also extended to consider families and childhood. One area in early childhood which has transformed enormously by mediatisation of society is play and its cultural artefacts; playthings or toys (Hjarvard, 2004, 2013). Recent studies have revealed that young children's activities are increasingly taking place through digital media platforms (Nilsen, Lundin, Wallerstedt, & Pramling, 2018). Indeed, the growing literature about *digital play* is one of the indications suggesting mediatisation is transforming young children's life-worlds and, how they glean meaning from the mediatised spaces of society, such as, families, museums, preschools, playgrounds, restaurants, family cars, public transport and the

like (see e.g., Bird & Edwards, 2015; Edwards, 2013; Edwards, Nuttall, Mantilla, Wood, & Grieshaber, 2015; Stephen, Brooker, Oberhuemer, & Parker-Rees, 2018; Stephen & Edwards, 2018; Stephen & Plowman, 2014).

Researchers have identified two forms of mediatisation of social and cultural activities and experiences, namely, direct and indirect mediatisation (Hjarvard, 2008a). Concerning direct mediatisation, activities previously conducted without digital media change to take on a media form. Among the forms of direct mediatisation is children's mediatised play represented by LEGO and other board and card games (Hjarvard, 2013). The mediatisation of play shows that boundaries between traditional and digital, online and offline play blur in mediatised societies and families. Hjarvard (2004, 2013) demonstrates how children's traditional play is increasingly transforming into digital play and video games. Using LEGO—a Danish toy manufacturing company as an example representing the mediatisation of children's play, Hjarvard (2004) explicates how the company gradually transformed into computer and video games from wooden and plastic bricks. LEGO began to produce wooden and plastic toys to stimulate young children's construction play in the mid-1950s (Hjarvard, 2004). As Hjarvard (2004, 2013) explains, the initial LEGO bricks modelled the physical inventories that reflected the modern world infrastructures, such as buildings, vehicles, roads, aircraft, ships, and trains. Four decades later, LEGO launched computer and video games reflecting the imagined and fictional worlds. According to Hjarvard (2004), the LEGO computer and video games have "a clear iconographic connection" with the physical bricks "because the fictional world of the games appears as brick-made universes" (p. 58). In LEGO computer and video games, the "bricks lose their physical and tactile sensory form and become represented in virtual universes" (Hjarvard, 2013, p. 122). This example suggests it is increasingly difficult to draw a clear distinction between children's offline and online, traditional and digital play forms. The blurring boundaries, between the forms of play of young children, suggests that mediatisation has and will continue to transform early childhood experiences.

As for indirect mediatisation, the social and cultural activities do not involve digital media directly, but instead, such activities refer to digital media images or texts—for example, cartoon characters (Hjarvard, 2008a). Here the symbolic features of media such as form, content or organisation intervene in existing social and cultural activities (Krotz, 2009). The kinds of

social and cultural activities referring to digital media for their content and organisation have been explored in detail by researchers researching digital technologies and popular culture in early childhood (see e.g., Arthur, 2005; Marsh, 2005). A sustained argument from these studies is that digital media derived images and texts are powerful content suppliers to children's play activities (Jenkins, 2006a; Marsh, 2005). Studies about popular culture have also suggested that digital media are setting agendas for young children's experiences, such as play, by providing content for their structure and organisation (Arthur, 2005). In such a context, children use digital media as sources of information and ideas that support other activities and practices (Daniels, 2017; Marsh, 2005). The ways in which digital media informs play have been clearly documented in previous 'popular culture' studies which suggest that young children refer to digital media texts and images during play (Marsh, 2005; Marsh, Plowman, Yamada-Rice, Bishop, & Scott, 2016). Media's symbolic content such as narratives, heroes and heroines picked up by children provide substance to their play and peer conversations (Arthur, 2005; Marsh, 2005). In addition to providing content for play, the production of childhood cultural artefacts such as toys and school bags reflect digital media texts and symbols (Hjarvard, 2013). The development of children's play over time from bricks to virtual universes suggests how changes in the media environment shape children's everyday experiences. That children's cultural activities develop and change according to transformations in the social and cultural conditions in which young children live supports the argument that digital media has transformed the social and cultural domain of children's life worlds (Livingstone, 2002; Buckingham, 2007a, 2009b).

The emergence of digital media was not only accompanied by great promise about how they would transform and modernise the society, but also, caused great concerns within the academic community, the political class, and the public about the negative effect it would have on society and culture (Buckingham, 2009b; Buckingham & Jensen, 2012; Livingstone, 2002). However, in an era where everything is mediatised (Livingstone, 2009b), new concerns arise. Growing up in families has always involved media. From comic books to cinema to music to television, theoretical and empirical studies about young children's engagement in and with their world show that media played a role in the socialisation of children more than a half a century ago albeit in a lesser intensity compared with what we are witnessing (Couldry & Hepp, 2017; Krotz, 2009). Today there exists at least in developed countries a plethora of media

platforms that make it difficult to analyse the influence that a single media platform exerts on social and cultural aspects of family life including the activities of young children (Couldry & Hepp, 2017). Seventy years ago, there was no mobile media or Internet. The television was centrally located in the living rooms of most families and seen as a 'fire-place' where all family members gathered during certain times of the day to view certain programs (Morley, 1988). Thus, television viewing was largely a family activity (Morley, 1988) conducted in "the collective space of the living room" (Livingstone, 2007, p. 302). The situation has changed in significant ways with the development and emergence of the Internet and mobile digital media. Currently, young children are using digital media in places not traditionally associated with digital media consumption such as in their bedrooms (Buckingham, 2006; Livingstone, 2002). Extensive ethnography studies of bedroom culture, in relation to young children's media consumption habits in homes, has demonstrated this point (Livingstone, 2007).

In summary, there is little doubt that digital media are increasingly becoming the artefacts of everyday life of families and young children not only in western countries but also in the developing world (Buckingham, 2007a; Marsh, 2015). This digital texturing of young children's everyday experiences makes it necessary to examine the *actual use* of digital media in context (Lauricella et al., 2017; Marsh, 2017; Plowman, 2016). Thus, in recent years, there has been a sustained interest in digital media as an object of sociological and psychological investigation with regard to childhood and children's life worlds. These research efforts are the outcome of public debates and anxiety discourses among policymakers, educators and parents about the perceived negative 'effects' that digital media may have on the optimal development of young children (Buckingham, 2007b, 2009a, 2009b; Livingstone, 2002). Special attention is being paid to 'under threes' because the science of brain development has shown the first three years of life to be crucial in the development of the human brain (Bornstein & Tamis-LeMonda, 2001; White, 1990, 2014). If there are any grounds for the claim made in media effects research, that digital media negatively affects children's well-being, then researchers should be seeking solutions for minimising those effects during this formative period when the brain is developing rapidly. It is undeniable that everyone, children and adults alike, do access and use digital media of some kind. However, when the discourse of digital media *effects* is brought up for discussion, "it is often children who are singled out for particular attention and concern" (Buckingham, 2009a, p. 347). Buckingham (2009a) asserts that young children, considered as a 'special

audience' with unique features and needs, receive significant attention both in academia and in public debates. Such concerns have warranted policy directions that require parents to mediate young children's digital media experiences (Takeuchi & Stevens, 2011), a topic that I will return to in the next chapter.

1.3 The Promise of Digital Media in Early Childhood

The intersection of digital media and childhood continue to be a contested area of research, practice, and public policy (Buckingham, 2007a, 2009b). In the last two decades, the notion of screen time has received significant focus in academic, political and public discourses (see e.g., Lauricella et al., 2015). The popular discourse around screen time has been that the proportion of time young children are spending using screen media has increased exponentially over the past twenty years (Madigan, Browne, Racine, Mori, & Tough, 2019). Arguments put forward suggest that screen time is harmful to the developing social, cognitive, linguistic and cognitive capabilities of young children (Madigan et al., 2019). One limitation of screen time studies is the lumping together of all kinds of screen experiences, regardless of the context in which digital media is accessed and used and the quality of those experiences. This study will not pursue this line of argument further beyond raising it in relation to the policy guidelines and their implications. Nonetheless, the outcome of the research efforts on 'screen time' has been a raft of policy guidelines that serve to regulate children's exposure to screen media and other related interactive technologies (Council on Communications and Media, 2016). From early on in its statements about screen time regulation for young children, the American Academy of Pediatrics advised parents not to expose children younger than two years to screen media (see e.g. American Academy of Pediatrics, 1999; 2013). With the realisation that the guidelines were unrealistic in the contemporary society increasingly filled with digital media technologies including mobile digital media, the American Academy of Pediatrics' Council on Communications and Media revised its policy guidelines recommending introducing children from 18-24 months, to high quality digital media, watched or viewed, with an adult to help them comprehend the media content (American Academy of Pediatrics. Council on Communications and Media, 2016). Further, the policy direction recommended not more than an hour of high-quality programming screen time for children between the ages of 2-5 and only with the help of an adult. Recently, for the first time, the World Health Organization (WHO) waded into the

debate with yet more strict policy guidelines that are somewhat similar to those issued by the American Academy of Pediatrics in their earlier policy statements. The WHO (2019) guided that children younger than five years *must* spend less time in front of screen media. The policy guidelines further recommended no screen time for infants under one year old. According to the recommendations, one-year-old children should avoid sedentary screen time such as playing video games and watching television. For the two-year-old children, "sedentary screen time should be no more than 1 hour; less is better. When sedentary, engaging in reading and storytelling with a caregiver is encouraged." These policy guidelines raise a good question about screen time, which is, what is wrong in using screen media for reading and telling stories with young children? There is also a need to understand the meaning of 'sedentary screen time' because even those who advocate for the use of digital media in early childhood do not encourage inactivity during screen time. Despite these strict guidelines being in place, what we know empirically is that there is a vast number of digital content and apps targeting young children (Lauricella, Blackwell, & Wartella, 2017).

While the debate on the issue of screen time regulation continues, digital media enthusiasts maintain that digital media in homes will help children learn in ways previously never witnessed (Gee, 2003; Giaquinta, Bauer, & Levin, 1993; Jenkins, 2006a). Research shows that many parents and educators are enthusiastic about the promise of technology and believe that integrating digital media in childhood can increase children's motivation to learn and engage with media content and the world around them so that no child is left behind in the knowledge society (Wartella, Blackwell, Lauricella, & Robb, 2013). Family and school reformers promote the argument that digital media has the educative promise of delivering twenty-first-century skills (Attewell, 2003; Attewell & Battle, 1999; Giaquinta et al., 1993). However, as Giaquinta et al. (1993) argue, it is misleading to assume that computing devices will drastically transform children's learning on their own. Pursuing a similar line of thought, Fiske (1994) believed that digital media have the *potential* to facilitate social change but they cannot do that on their own. Giaquinta et al. (1993) and Attewell and Battle (1999) suggest achieving the promise is possible, but it will require an understanding of and fostering of a variety of enabling social and cultural conditions; what they have labelled the 'social envelope' resources. It is important to emphasise the idea that young children's consumer culture relating to digital media (Buckingham, 2007a) occurs in social and cultural contexts (Livingstone, 2002;

Livingstone & Helsper, 2008) comprising of enabling and constraining factors with regard to learning with digital media. Therefore, gaining a full understanding of the role and value of digital media may require researchers to consider the cultural, historical, social and institutional contexts in which families and young children access and use them. This consideration necessitates a critical examination and promotion of the 'social envelope' conditions that surround the use of digital media (Warschauer, 2016). *Social envelope* resources refer to the social relationships and the roles of adults especially parents in supporting and scaffolding children's digital media experiences (Lauricella et al., 2017; Pempek & Lauricella, 2017; Warschauer, 2016). Such social support strategies may include having an interest in children's digital media activities, encouraging children to name and identify objects, talking about media with children, helping children make connections between digital media content and their real-world experiences and so on. When children are supported by adults who are genuinely interested in their activities, the can play, create and represent complex ideas in thoughtful ways through digital media platforms (Danby et al., 2015; Daniels, 2017; Davidson, 2009; Marsh, 2015).

1.4 Positioning Global South Countries in International Research

Though I conducted this study in a global south country, it is critical to place it within a global scientific research context. When reviewing literature about children's engagement with digital media in formal and informal settings alike, it becomes clear that research is lacking in some parts of the world. Marsh (2015) raised concerns about limited research on this subject matter in the global south countries. She points out that the global north has the highest concentration of research concerned with young children and digital media. She observes that research is not keeping pace with the proliferation of digital media in homes and young children's lives in developing countries (Marsh, 2015). The reasons for the lack of research activities in developing countries are unclear. One might assume that digital media is not widespread in these regions of the world. To the contrary, what we know from leading media scholars is that "even in the rural areas of developing countries, the advent of electronic media is often an early harbinger of 'modernisation'; and growing numbers of children have access to globally- and locally-produced media material" (Buckingham, 2007a, p. 347). Even with such evidence of an increase in the uptake of digital media by young children in developing

countries, Marsh (2015) notes that there is very little understanding about young children's digital media practices in the global south. She has suggested that there is an urgent need for research in the global south to help us understand how young children engage with digital media and the literacies they obtain.

Several speculations about the reasons for lack of research in this area are also possible. First, many competing areas in the social and economic sphere require political and academic attention in these countries. Research into poverty, provision of clean water, primary healthcare, and universal education takes priority while investigating digital media in early childhood does not. Second, early childhood research in all domains, namely, socio-emotional, cognitive, and language, is at the infancy stage in continental Africa. The lack of research data about digital media activities and practices is the case regardless of the rich research base on young children's rearing practices laid down by anthropologists, cultural psychologists, sociologists and clinicians from the west more than five decades ago. For instance, as early as in 1960s Whiting (1963) and Whiting and Whiting (1975) were already studying young children in some parts of Kenya and other parts of the developing world. These, among other studies carried out in Kenya, such as those by Super and Harkness (1986), and Tudge et al. (2000), did not consider digital media. Notably, encouragement for local researchers to continue investigating young children's engagement with rapidly changing social and cultural conditions of family life is lacking.

Early childhood research, especially about children's access and use of digital media in most Sub-Saharan African countries, is at the infancy stage. Due to infrastructural and economic challenges, digital media is not widely used in early childhood centres in countries such as Kenya. There is very little systematic research data about digital media and technologies and even less (none that I am aware of at this point) on joint media engagement in Kenya. Joint media engagement is also a new concept in the study of digital media in childhood that is barely a decade old (Stevens & Penuel, 2010) and has not been studied widely, even in western countries. In such a context, my study about joint media engagement is a ground-breaking research in Kenyan homes as far as research about children's engagement with digital media in the context of families is concerned.

The government of Kenya commenced the process of issuing laptop computers in 2016 to children who were beginning primary school through its one-laptop-per-child educational reform policy. Since then, the debates in the academic and research community revolve around the preparedness and efficacy of primary school teachers to use technology to deliver the curriculum. No studies have sought to understand the kind and nature of activities and practices young children are doing with the laptops. A few studies I have come across examined the factors influencing the integration of technology in early childhood education settings (Kaindio & Wagithunu, 2014; Odundo, Ganira, & Milimu, 2017; Ogott & Odera, 2014). Other studies investigated technology use in general but not involving young children. For instance, Wyche, Smyth, Chetty, Aoki, and Grinter (2010, April) researched the use of desktop computers and mobile phones in homes and workplaces among "professionals living and working in Nairobi who regularly use ICT" (p. 2593). The study findings highlighted difficulties people face "when using the internet in infrastructure-poor settings" (p. 2593). The difficulties were associated with limited bandwidth, high cost, physical and virtual security threats, among others. However, this study did not focus on children's experiences and family engagement with the digital. Kenya presents endless opportunities for researching young children's engagement with digital media and joint media engagement in families.

1.5 Aim of the Study

This study aimed to employ socio-contextual, theoretical perspectives and qualitative research methods to obtain deep insights into joint media engagement between parents and young children in homes. The social contextual theoretical framework of this study borrowed primarily from cultural historical theory (Vygotsky, 1929, 1978), and socioecological theory (Bronfenbrenner, 1977, 1979, 1993; Bronfenbrenner & Morris, 2006), together with other theories informed by Vygotsky's and Bronfenbrenner's work, such as mediated discourse (Scollon, 1998), mediated action (Wertsch, 1991, 1994), sociocultural approaches to the mind (Rogoff, 1993, 1995, 2003; Rogoff, Mosier, Mistry, & Goncu, 1993; Wertsch, 1991, 1994), cultural-ecological theory (Tudge et al., 2006), and ecocultural theory (Weisner, 2002), among other theories emphasising the situated character of learning. The single qualitative case study (Yin, 2018) employed video observations (Derry et al., 2010) and interactional analysis (Norris,

2013). The thesis sought to answer the following questions, using these theoretical and methodological guidelines:

I. What are the social and communicative features instantiated in joint media engagement between parents and children aged birth-to-three years at home?
II. What is the role played by digital media and associated texts in the social and communicative features of joint media engagement?
III. What do the social and communicative features potentially tell us about the forms or nature of learning that might occur in joint media engagement?

1.6 Personal Orientation to the Research

To claim that research is values-free is incorrect because all researchers have a biography they bring into a research situation (Denzin & Lincoln, 2008). Chapter three discusses the researchers' explicit or implicit personal biographies suggesting how these might shape their research activities. I wish to highlight my orientation to research briefly. I arrived in the Western world in 2012 to pursue postgraduate education after I had graduated with a bachelor's degree a year earlier in Kenya. At this time, I came face-to-face with Western philosophies and thought systems about education and rearing of young children. By this, I do not mean I had never heard about Western philosophies of education and child upbringing. I had been introduced in my undergraduate education to the work of John Dewey, Jerome Bruner, Lev S. Vygotsky, Urie Bronfenbrenner, Friedrich Fröbel, Sigmund Freud, and Johann Heinrich Pestalozzi, among others, albeit superficially. However, I had not read the original work of any of these philosophers and psychologists prior to my arrival in the west. Throughout my postgraduate education and particularly during my doctoral training, I have had the opportunity to read the original work of several psychologists and philosophers that shaped the Western thought system while relating such new understanding to the African indigenous knowledge systems, in which I am grounded. Like culture which has some universal elements across communities (Rogoff, 2003), I have found some common understanding that cuts across the Eurocentric and Afrocentric conceptions about knowing and education.

Before going to Europe to study for a master's degree in early childhood education, I worked as a tutor in a teacher training college for three years. I became a teacher trainer when I was in the third year of my Bachelor program. After graduating, I worked briefly in a primary

school as a grade one teacher. During my teacher training and practice as a teacher and tutor, I worked within *participatory learning* philosophies founded on the values of communality and cooperation among people. African thought systems and ways of knowing derive from the traditional communal lifestyle of the African people (Letseka, 2000; Nsamenang, 2005a, 2005b). The fact that I have taken most of my education in Africa means that I have been socialised through the traditional African thought systems and their associated cultural practices and I have learned a set of social and cultural conventions that frame the way I read and analyse the social world. African thought systems are many, but I wish to acknowledge only two, *Harambee* philosophy whose origin is in Kenya and *Ubuntu* from South Africa but shared by many African countries nonetheless.

The word Harambee means 'pooling together', and it was used by the founding president of the Republic of Kenya shortly after the country gained independence from Britain to implore Kenyans to pool their resources and expertise to build a new independent state (Ondieki & Wegulo, 2003). The literal meaning of Ubuntu is humanity or humanism, highlighting the significance of interdependence and human relationships. Founded in the traditional communal lifestyle and cooperative values of the African society both Harambee and Ubuntu, emphasise the significance of interconnectedness and relationships among people for the well-being of the whole society. Dialectical knowing from Harambee and Ubuntu philosophies shape, and are in turn shaped, by traditional African cultural practices and values. According to Mawere and Mubaya (2016), Ubuntu aims to build the "community as well as bonding people in a network of reciprocal relationships" (Mawere & Mubaya, 2016, p. 99). Ubuntu embraces the "embodiment of African culture and lifestyle. It acknowledges that facts are relational/contextual, and incorporate many components, and transfers everything into an embodiment in people (holism) … Within Ubuntu, all interactions are oriented towards the common ground" (Mawere & Mubaya, 2016, p. 99). Within this understanding, traditional African education and socialisation practices are meant to promote "interpersonal and cooperative skills and human flourishing" (Letseka, 2000, p. 179). This sense of community in the African society radiates and manifests itself in the activities and routines of families and young children who are believed to be capable of self-directed learning cultivated through socialisation (Nsamenang, 1992, 2005a, 2005b), with traditional child-rearing practices meant to

enliven the inborn qualities of children so that they extract lessons from their cultural settings (Nsamenang, 1992, 2005b).

Many African sociological and cultural researchers argue that theoretical frameworks developed in western countries reflect a Eurocentric perspective and are therefore not relevant in the analysis of social problems confronting the African society (Nsamenang, 1992). I believe African indigenous thought systems resonate with these theories. There are elements within Ubuntu and Harambee philosophies of education and child upbringing that are consistent with those advocated by sociocultural theorists. One such element is *participatory learning* (Letseka, 2000; Mawere & Mubaya, 2016). The notion of participatory learning is similar to Rogoff's (2000) idea of social transformation through participation in culturally valued activities. Jenkins' (2006a) participatory cultures in mediatised contexts where individuals gain digital literacy through active participation using digital media with others also reflect this understanding. Most of the socio-contextual theories used in this thesis speak directly to the indigenous knowledge systems of African people due to their emphasis on active participation in culturally valued activities as a source of social transformation and development. Note that since colonisation and the introduction of formal schooling in Africa, cross-fertilisation of Western and African philosophies occurred.

1.7 Outline of the Thesis

In chapter one, I have prepared the stage for the entire thesis. I began the chapter by establishing that an important conversation with regard to children's engagement with digital media in homes is taking place. I acknowledged that even though the proposition of joint media engagement as a strategy to promote learning from digital media by young children exists, its basic elements that make it a good site for learning are undertheorised. I carved my research territory by announcing that I am interested in understanding and theorising the social and communicative features of joint media engagement. Consequently, I have attempted to locate the digital media activities of children in homes within the broader context of the changes and transformations occurring in the media landscape and how these changes shape, and are shaped, by family routines and relationships. Furthermore, I have also briefly touched on the significance of the 'social envelope' for understanding the kinds of learning potentially present in joint media engagement. I have also attempted to identify the global south countries in our

international understanding of young children learning with and around digital media, noting that these countries continue to contribute very little to scholarly literature and suggesting that scaling up research in these parts of the world requires determined efforts. The aims of the study and research questions close the chapter.

In chapter two, I delve into the literature and emerge with a discussion of previous studies not only those considering joint media engagement but also those informing this topic. I note that only recently has the study of young children's digital media experiences in home contexts become an area of interest to researchers. As such very few empirical studies carried out with children under the age of three in-home contexts exist. The decisions about children's use of digital media in families are emotionally loaded and necessarily implicated in child-rearing practices. Thus, it is impossible to try to understand joint media engagement devoid of the family dynamics, including the everyday routines and parenting practices. Before I move into the literature of parental mediation theory and joint media engagement, I briefly discuss the theories of technology as well as the emotional work of digital media in families with young children. I then discuss previous empirical studies about parental mediation and joint media engagement with a keen eye on the methodological and theoretical orientations used, noting the key research findings while highlighting the gaps in the knowledge.

Chapter three presents the theoretical framework underpinning this study. Here I integrate several contextualist theories that explain the psychology of human activity and mind. The aim is presenting a theoretical framework adequate to analyse joint activities in general, including joint media engagement. I refer to *joint activities* in general because there is no specific theory designed to analyse joint media engagement. Building on the contextualist concepts of mediated action and social situation of human learning and development, I reconstruct my language in a way that permits me to approach and analyse joint media engagement as social interaction in the same way interactional sociolinguistics analyse conversations. To analyse 'joint activity' as social interaction necessitates paying attention to the social contextual conditions encompassed in the activity – the elements of the setting in socioecological psychology terms. The social contextual factors are the conditions that invite or inhibit people from participating in valued sociocultural activities.

In chapter four, I discuss the methodology and methods used to generate and analyse data. In this chapter, I note that qualitative research is an umbrella term used to refer to many methodologies and methods for data generation and analysis. I therefore briefly highlight the basic principles subscribed to by most genres of qualitative research followed by a description of a qualitative case study approach as a science of the 'particular' that aims to obtain detailed insights about the social or psychological issues under investigation in a way that retains their contextual robustness. I then present the steps for recursively analysing video data and close the chapter by discussing ethical issues around the subject of researching *with* young children.

Chapter five presents the findings in the form of four crucial social and communicative features, engendered in joint media engagement based on my fieldwork observations, providing arguments related to where parents should focus during joint media engagement. In chapter six, I try to delineate the kinds of learning implied by the social and communicative features presented in chapter five. I make a bold move in this chapter by drawing on additional theoretical resources that enable me to formulate nuanced claims about the learning potential of joint media engagement with young children in families. The guiding question in this chapter is, what might the social and communicative features of joint media engagement tell us about the forms of learning potentially happening in joint media engagement?

The seventh and final chapter concludes the thesis providing a summary of claims made throughout and highlighting the development process, I progressed through as a researcher. The main aim of a doctoral thesis is to contribute to existing knowledge and to develop new knowledge in a particular research territory. As such, I point out the contributions I have made towards understanding joint media engagement between parents and children aged under three years. As well, the chapter describes possible directions for future research about joint media engagement. Finally, I finish the chapter with a brief conclusion.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter presents not only current but also classical literature about young children's engagement with digital media in informal settings, especially the home. The literature review provides an overview of young children's digital media activities and practices, including those with old media such as television as I am interested in digital media texts and not in the material technologies per se. Indeed the boundaries between 'old' and 'new' media have blurred as a result of 'digitisation' fuelled by the Internet (Couldry & Hepp, 2017). I have divided this chapter into five sections. The first section details the strategies I used to search and locate relevant literature about joint media engagement focusing on parents and young children in informal settings primarily the home, but also in museums and other non-school settings. The second section presents theories of technology that have largely gone unnoticed in theorising young children's engagement with digital media in early childhood. I describe three theories of technology and propose one, which I defend as being productive for the analysis and understanding of joint media engagement. In the third section, I introduce the topic of the 'emotional work' of digital media and argue that parental decisions to engage in interpersonal interaction and communication with young children involving digital media are quite emotive when keeping in mind the popular anxieties caused by media *effects* research and screen time discourse. The fourth section explores the historical roots of joint media engagement by critically examining literature around parental mediation theory. It is worth noting that the concept of 'parental mediation' differs from 'joint media engagement,' but the latter has its root in the former. Joint media engagement builds on the rich understanding of co-viewing, one of the three strategies used by parents to mediate young children's digital media experiences. My focus in this section is explicating current knowledge about co-viewing and how it relates to 'instructive mediation', while exploring how the two parental mediation strategies feed into joint media engagement. The fifth and final section discusses the emerging literature on joint media engagement and identifies the gaps in knowledge around this subject matter and how this thesis stands in addressing the identified knowledge gaps.

2.2 Literature Search Strategies

There are different types of literature reviews: systematic reviews, scoping reviews, meta-analysis, and traditional or narrative literature reviews. In this chapter, I present a traditional literature review in part because joint media engagement research has not matured to qualify for a meta-analysis or systematic review. The beginning point of searching and organising one's literature on a particular topic of interest is to have a well-defined topic that one wishes to study (Hart, 2001). Having a precise topic gives a researcher an approximate idea about the scope of the search, the quality of materials to be searched and their appropriateness for informing the subject matter (Fink, 2005). According to Hart (2001), knowing how to use the library and other search engines to perform a literature search is a significant skill that allows for comprehensive literature reviews. From the beginning of my doctoral training in 2016, I wanted to explore the broad topic of joint media engagement between parents and young children at home. The literature relating to joint media engagement at that time was scarce, and there were very few papers and reports accessible online. I was not finding literature because my search term — 'joint media engagement' — was too narrow. In the search engines, these three words returned literature related to developing and fostering 'joint attention' and 'joint engagement' among autistic children, not the type of literature that could robustly inform my topic. I had to widen my search, and one of the methods that proved effective was to break down my topic into searchable words or phrases (Fink, 2005; Hart, 2001; Robson & McCartan, 2016).

In the past researchers approached and studied parent-child interactions with digital media using different names and topics. The term joint media engagement originated within the academic community in 2010 (Takeuchi & Stevens, 2011). After the term became operational and spread within the academic community researchers commenced researching ways in which parents, teachers, librarians, and siblings support young children's digital media experiences directly using 'joint media engagement' as a topic albeit in a variety of configurations. However, there were few previous studies in existence, examining the family support young children receive while consuming digital media. Early studies such as those of Plowman, and her colleagues (see e.g., Plowman & Stephen, 2007) examined issues around joint media engagement while investigating a different topic. Plowman and Stephen (2007) used 'guided interaction' as their research topic, essentially capturing some of the discussions engaged in by

joint media engagement scholars today. Other researchers used the concept ‘co-play’ to reflect ideas of joint media engagement (Levine et al., 2014). Marsh et al. (2015) articulated ways of initiating young children in families’ digital literacy using the term “intergenerational digital literacy practices” to show how parents and young children engage with digital media together (p. 55). Amaro, Oliveira, and Baldi (2018, September) also studied ‘intergenerational joint media engagement’ where they explored the interactions and communication processes that occur when grandparents and middle-aged to older adults use tablets and tablets’ apps. Connell et al. (2015) on their part researched parental ‘co-use’ of digital media with children. I singled out four ways — ‘guided interaction,’ ‘co-play,’ ‘intergenerational digital literacy practices,’ and, ‘co-use’ — to show the different approaches researchers used to study joint media engagement suggesting that any researcher studying joint media engagement must cast the net widely in their literature search on this topic.

I performed advanced searches in *ProQuest Education Database, ERIC (ProQuest), Education Source, Sage,* and *JSTOR.* Google Scholar searches supplemented the research articles, book chapters, and dissertations from these databases. I also relied on historical searches, investigating the articles and book chapters cited in the literature I obtained from the databases. I implemented a search strategy of breaking down my research topic and pairing key concepts such as:

‘Joint media engagement’ AND ‘Parents’ AND ‘Children’
‘Joint media engagement’ AND ‘Family’
‘Joint media engagement’ AND ‘Young Children’
‘Co-play’ AND ‘Parents’ AND ‘Children’
‘Shared reading’ AND ‘E-book’
‘Digital media’ AND ‘Young children’
‘Parental mediation’ AND ‘Young children’

To assess whether or not the literature was relevant to my topic, I skimmed through the abstracts of the articles, book chapters and dissertations looking for the research questions, the methodologies used, and the main findings. In cases where the abstract failed to provide the information I sought, I read the first two sentences of the introduction and skimmed through the

conclusion. Before I present the literature, I offer a few words about theories of technology and the stance which, to some extent, shaped my reading and critical discussion of the literature.

2.3 Theories of Technology

Theories of technology attempt to explain the relationship that existing between technology, society and culture (Nye, 2006; Selwyn, 2011; Stephen & Edwards, 2018) because society is made up of humans, technology theories necessarily examine human-technology relations (Ihde, 1990). Theories of technology aim to understand, evaluate and criticise ways in which technology reflects as well as transforms human life, activities, societies and environments. These theories are rarely mentioned by researchers when theorising young children's digital media experiences in early childhood (Stephen & Edwards, 2018). As researchers, we frame our research topics with presumptions about how we, or society, view and use digital media. The ontological and epistemological treatments of digital media span diverse views not only in the philosophy of technology (Ihde, 1990) but also in social and educational discourses (Selwyn, 2011). Views about the relationship between humans and digital media are filled with utopia, romanticism and hope all of which necessarily hold presumptions about what happens between people and digital media (Ihde, 1990; Nye, 2006). Gibbons (2010) and Stephen and Edwards (2018) discussed three schools of thought that explain the nature of the human-technology relationship, namely, technological determinism, substantive, and critical perspectives. Even though socio-contextual learning theories underpin my thesis, I also firmly believe that taking a stance about how I view the way we humans relate with digital media, would strengthen the line of argument I am making.

Technological determinism is an externalist view of digital media in relation to childhood and young children. Drawing on the externalist views about technology, Nye (2006) argues that technological determinism treats "new technologies as autonomous forces that compel society to change. The public has an appetite for proclamations that new technologies have beneficent "natural" effects with little government intervention or public planning" (p. 27). Technological determinism reflects a media-centric perspective that assumes digital media drives human behaviour in particular directions (Gee et al., 2018; Morley, 2012). In early childhood, the 'effects' research, assuming a cause-and-effect model, continues to inform this popular discourse of technology as responsible for all sorts of developmental deficiencies

observed in young children. Stephen and Edwards (2018) provide the example of an iPad (and I will add all screen media) as increasing 'screen time' which in turn reflects children's reduced physical activity hence leading to many becoming obese. Proponents of this body of thought assume that digital media determines social change in early childhood. Similar deterministic views about the human-technology relationship accompanied the adoption of educational technology in schools and homes with an underlying assumption that technology will revolutionise the way students learn (Giaquinta et al., 1993; Selwyn, 2011). The views around technological determinism have been challenged (see e.g., Selwyn, 2011). The pervasiveness of digital media in all spheres of human activity "does not imply that new social forms and processes emerge as a consequence of technological change" (Castells, 2010, p. 5). Indeed, as Castells (2000) succinctly writes,

> [t]echnology does not determine society. Nor does society script the course of technological change, since many factors, including individual inventiveness and entrepreneurship, intervene in the process of scientific discovery, technological innovation, and social applications so that the final outcome depends on the complex pattern of interaction. Indeed, the dilemma of technological determinism is probably a false problem since technology *is* society, and society cannot be understood or represented without its technological tools. (p. 5)

Rather than technology determining society or society determining technological innovation, Castells (2010) argues that technology embodies society on the one hand while society uses technology on the other hand (see also Smith, 1994; Smith & Marx, 1994). Similar views about the role of digital media in culture and society, were expressed by Fiske (1994), who established that "technologies cannot in themselves produce social change, though the can and do facilitate it" (p. 115). According to Fiske (1994), there are additional conditions that combine with digital media to cause social change.

The second body of ideas about technology vis-à-vis its relationship with culture and society assumes that technology is "interwoven with human life, shaping it to such a degree, that we cannot just distance ourselves and turn technology's function around" (Elzinga, 1998, p. 27). These epistemological views about the relationship between technology, society and culture derive from a substantive theory of technology. The substantive view treats technology as

everyday life artefacts, intertwined in peoples' daily life to the extent that even though seen as material things, they appear to be invisible. Stephen and Edwards (2018) provide clear examples to illustrate the substantive ideas about the role of technology in society. These researchers posit that the washing machine, the automated teller machine, and the microwave oven have shaped our cultural systems of doing laundry, obtaining cash, and cooking that we rarely notice these technologies while performing our everyday tasks. In other words, the technologies vanish phenomenologically into the social environment by falling into the cultural habits of conducting everyday life. As technologies enter the habits of life, they fall away from our conscious awareness of their availability (Wise, 2012). This substantive approach to technology reflects Mark Wieser's ideas about ubiquitous computing. Weiser (1991) remarked, "The most profound technologies are those that disappear. They weave themselves into the fabric of everyday life until they are indistinguishable from it" (p. 94). The development of wearable technologies is one of the examples that show digital media have indeed become indistinguishable from everyday life to the extent that most of them are seemingly invisible, possibly mimicking older familiar items, while structuring and organising our everyday living in fundamental ways (Plowman, 2016).

Critical theory of technology is the third and final line of thinking about the role of technology in society. The critical tradition of analysing human-technology relations has its roots in the Frankfurt School of Critical Theory which in the past three decades has been "concretised through a constructivist approach to the analysis of specific technologies, artefacts and systems" (Grimes & Feenberg, 2013, p. 121). Feenberg (1991) a dominant figure in advocating for a critical analysis of technology in society, draws his inspiration from Herbert Marcuse's critical theory and Marx Weber's theory of modernity. Feenberg's (1991), critical theory of technology argues that the inherent qualities of technology are contestable, and that society should constantly question the value of technology to social and cultural environments. In other words, Feenberg (1991) believes the society's response to any technological artefact should be to question how technology improves the conditions and quality of life for present and future generations. The adherents of this line of thought reject the technological determinist claim that technology is responsible for the social changes witnessed and instead argued that society adapts technology to its social, cultural, institutional and ideological environments and needs (Grimes & Feenberg, 2009, 2013).

Accordingly, the essence of all technologies in society is not about their intrinsic qualities nor their potential, but rather it is about how technology as cultural tools come into being in areas they are adopted (Feenberg, 1999). By viewing technology's essence and technological systems in terms of the "locus for the sociocultural variables that actually diversify its historical realisations" (p. 201), Feenberg (1999) sees technology as socioculturally embedded, meaning that a symbiotic relationship exists between technological systems and society. In the context of this thesis, I adopt a critical perspective to analyse digital media in the lives of families and young children. The critical view of technology is, in many respects, important with regard to the argument I am developing. First, joint media engagement as a social practice occurs at the point of intersection between digital media and social, cultural and institutional settings that have historical ideologies about the value of digital media in families. This point of intersection produces discourses for contestation and reflexivity in society as witnessed by heightened debates about screen time, as well as in families reflected by parental decisions about monitoring children's patterns of media consumption. Secondly, the critical perspective of understanding and analysing technology aligns closely with the epistemology and ontology of contextual constructionism as well as socio-contextual theories of learning whose analysis emphasises human learning and development as emerging from historical, social, cultural, and institutional conditions of human existence. Let me now turn to the emotive work of parents in managing young children's engagement with digital media.

2.4 The Emotional Work of Digital Media in Families

Recently I was on a Melbourne train heading home in the evening. The passenger seats on Melbourne Metro trains face one another. A middle-aged man sat on the seat in front of me as he talked on the phone; I assumed with a close relative or friend. The look on his face and the tone of his voice depicted a very concerned parent. He was complaining about his nine-year-old son who had 'not said a single word' to him in a couple of days. He had no problem with his twelve-year-old son because they were having good conversations together, but the younger son was always playing video games whenever he came home from work, and he did not even respond to his greetings. He was extremely concerned about who the boy was becoming, and he regretted buying him a tablet in the first place. He was seeking a workable way of withdrawing the tablet that would not upset his son.

This scenario made me think about the emotional work involved in raising children in the digital age. Turkle (1997) explains that we are increasingly living our lives on the digital media screens. The shift from connecting with human beings to being preoccupied with screens may lead us to expect more from digital media and less from people around us (Turkle, 2011). Decades of research suggest that the richness and quality of human life lie in social interactions among people (Bronfenbrenner, 2005). Wartella et al. (2016) explored broader issues within the sociocultural context in which digital media is constructed as a 'more knowledgeable other' capable of scaffolding children's understanding in a variety of knowledge areas. With the possibility of digital media becoming 'significant others' in children's lives, in place of parents or adult members of society and peers, Wartella et al. (2016) raise concerns about the kind of adults the current generation of children will become. This does not mean that human sociality has disappeared entirely. There is enough empirical evidence demonstrating that children and young people are having meaningful connections and learning opportunities online and offline with digital media. Gee's (2003), research showed how interest-based learning of young people takes place in 'affinity spaces'. Ito, Baumer, Bittanti, Boyd, Cody, Stephenson, … Tripp's (2010), extensive ethnographic study of digital media use by young people revealed unprecedented learning opportunities where those youth who are immersed in the digital culture explore games, social interaction, language and problems solving that results in diverse forms of learning. The beckoning questions are,

- How can the concerned father I have spoken about allow his nine-year-old to engage with digital media while at the same time maintain a meaningful connection with him?
- Is withdrawing the tablet from his son the best solution in the twenty-first century where digital literacy skills are vital in all aspects of life?

These are the challenges parents face regarding approaches to managing digital media in the lives of young children.

Making decisions about how to monitor young children's consumption of digital media necessarily involves emotions (Clark, 2011; Clark, 2012a, 2012b). There is relatively less research exploring the emotional work of parents when it comes to decision making about

interpersonal interaction and communication with young children about digital media (Clark, 2011). Researchers need to pay attention to the emotional side of parents allowing or not allowing children to use digital media in families. An understanding about the emotional work involved in managing digital media in homes may help researchers find ways to support parents as they raise children in 'mediatised families' (Couldry, 2012; Couldry & Hepp, 2017; Krotz, 2009). Clark (2011); Clark (2012a, 2012b) examined the emotional work of parents concerning their involvement in regulating and managing young children's digital media experiences. I mostly cite her work here to establish my point. Clark (2011); Clark (2012a) found many studies focus on the role and use of media, such as television, in connecting people and structuring time and space. However these studies neglected "the anxieties parents have regarding children's media use, how media might be experienced differently in differently situated families, or how families negotiate the changing developmental and identity needs of children" (Clark, 2011, p. 329). Drawing on Hochschild's (1983) concept of 'emotional labor' Clark (2011), suggests that 'emotional work' "offers a different lens through which to consider how and why parents engage in mediating the media as they do" (p. 330).

Clark (2011) argues that parents' decision making about the use of digital media by young children involves their emotions closely tied to parenting and the wellbeing of their children. She writes that,

> How parents establish rules or guidelines in relation to communication technologies, such as mobile phones, laptop computers, iPods, and television is not always easy to explain in relation to what researchers have defined as good intentions or rational choices, as previous research has suggested. Decision making has to be understood in relation to a number of contextual factors, including both the desire to be "good" (or "good enough") parents and the desire to balance family and economic needs effectively, both of which are emotionally charged issues… And parents and young people experience different emotions when it comes to media themselves: Parents feel *anxious* not only about television content but also about how mobile phones and social network sites provide more freedoms and hence more possibilities for risk and connections to unknown others. In contrast, young people (especially teens and preteens) feel *happy* about how media provide these things. (p. 330, italics in original)

The message Clark (2011) conveys is that while good parents would like to be consistently involved in their children's lives to ensure they are thriving, the daily demands of life sometimes do not allow that to happen, leading to mixed feelings. Take, for example, the issue of screen time. The amount of screen time has risen over the years (Madigan et al., 2019) partly because some parents use digital media such as television as babysitters. Feelings of guilt on the part of the parent for not being a good parent accompany the decision to make use of television to occupy children while they accomplish household tasks undisturbed (Clark, 2012a). Parents may also actively engage children in the use of digital media because of the anxiety around the potential negative 'effects' of digital media and the risks that come along with young children's online activities such as cyberbullying (Livingstone & Helsper, 2008). Gee et al. (2018) reported that parents make decisions about digital media use in homes that closely align with family values, parenting approaches and the needs of families and children. As I have already argued in chapter one, analysis of socialisation of young children in contemporary families especially in global North nations cannot occur without considering the role that digital media plays in families (Couldry & Hepp, 2017; Hjarvard, 2013, 2018; Krotz, 2009). The emotional work of parents in making decisions about young children's engagement with digital media determines to a large extent the type and nature of interpersonal interaction and communication about, with and around digital media (Clark, 2012b).

2.5 Family Interpersonal Interaction and Communication Strategies in the Digital Age

The need for parents to enlist interpersonal interaction and communication strategies to mediate children's digital media use arose from the concerns about the presumed harmful effects digital media have on young children's development noting that the first five years of life are critical for brain development (Madigan et al., 2019). We are surrounded by discourses which tell us over and over again that digital media negatively affects young children's optimal language and mental development especially when they are over-exposed to screen media (Madigan et al., 2019; Morley, 2012). We constantly receive information suggesting that digital media is anti-developmental to the extent that some claim screen media are hijacking our children. Neglecting these concerns related to the use of digital media in families may freeze some of the interactional patterns important for developing children. For instance, Bronfenbrenner (1979) argues that,

> Like the sorcerer of old, the television set casts its magic spell, freezing speech and action and turning the living into silent statues so long as the enchantment lasts. The primary danger of the television screen lies not so much in the behavior it produces as the behavior it prevents-the talks, the games, the family festivities and arguments through which much of the child's learning takes place, and his character is formed. Turning on the television set can turn off the process that transforms children into people. (p. 242)

For Bronfenbrenner (1979), those studying the relationship between digital media and young children's development need to abandon looking for direct associations. Rather, they should look for the effects of digital media not on children but on the interactive processes that instigate development. Indeed, research shows that less conversation occurs when people watch television and brief episodes of talk usually happen during commercial breaks (Lull, 1990). According to Madigan et al. (2019), when children view screen media programs, they may miss opportunities to practice and master interpersonal, motor, and communication skills. Bronfenbrenner (2005) was interested in interactive processes that make human beings human. He argued that television, and any other screen media make people tune out those around them and since individuality emerges from interacting with objects, symbols and other human beings, adults must make genuine efforts to promote the behaviours digital media appear to freeze. Essentially, digital media need not freeze but rather, stimulate and enrich talk, play and arguments, activities and process through which children learn in family contexts. Such concerns led researchers to investigate what parents can do during those moments when children view television and other newer interactive screen media (Clark, 2011; Clark, 2012a, 2012b; Levine et al., 2014; Livingstone & Helsper, 2008; Mehus & Stevens, 2011; Stevens & Penuel, 2010; Takeuchi & Stevens, 2011; Valkenburg et al., 1999; Warren, 2003, 2005). The result of these efforts are categories of parental mediation strategies that are meant to mitigate the effects of media on the one hand, and promote learning on the other hand (Clark, 2011). There are three main strategies gleaned from the literature: restrictive, instructive, and social co-viewing (Valkenburg et al., 1999). Clark (2011) added 'participatory learning' as an additional mediation strategy that seems to combine co-viewing and instructive mediation strategies which in my view speaks directly to joint media engagement, a topic I will return to in the next section.

2.5.1 Restrictive mediation.

Restrictive mediation with children is a type of interpersonal communication strategy related to digital media involving setting rules and regulations limiting the amount of time children spend using digital media as well as the type of programming they are allowed to watch (Clark, 2011; Valkenburg et al., 1999; Warren, 2003). This strategy, also known as "times rulemaking" is mainly applied to assert parental authority over children (Valkenburg et al., 1999, p. 53). Research shows that parents apply a restrictive form of mediation differently according to the age of children. Warren (2003) while investigating parental mediation strategies during children's television viewing found out that restrictive mediation was more common for children under the age of 6 years. Alternately, this form of mediation was less frequent with older children and adolescents where social co-viewing was observed (Warren, 2003). Research about television viewing shows that restrictive mediation leads to positive outcomes because children engage in alternative activities deemed more important such as reading books and, exposure to educational programs when they have opportunities to view television (Nathanson, 1999). Nathanson (1999) extolls that the cumulative positive outcomes of restrictive mediation outweigh those of co-viewing. The notion of restrictive mediation has attracted much criticism considering children's rights and the importance of digital media literacy in the contemporary world (Jenkins, 2006a, 2012). Participatory culture encourages children to embrace every opportunity to benefit from digital media (Jenkins, 2006a). Jenkins (2006b), one of the leading media critics, argues that society needs to work together with parents to ensure they have quality resources because "Education, not regulation, is going to ensure that parents get to decide what kind of media their children consume" (p. 203).

2.5.2 Instructive mediation.

Instructive, also known as evaluative, or active mediation, involves watching programs together with young children and discussing some aspects of those programs (Valkenburg et al., 1999). The discussions about the programs may occur before, during or even after the programs (Clark, 2011; Valkenburg et al., 1999). The goal of this form of parental mediation is to expand and elaborate the content and link it to children's real life experiences so that the children can make sense of the content of digital media (Warren, 2005). This strategy of restrictive mediation has proved effective in mitigating the perceived negative effects that television programs may have on children such as aggression on the one hand while promoting prosocial behaviours on

the other (Clark, 2011). Even though research on the mediation of television and other digital technologies focussed on parents, active mediation among siblings and peers shows equally positive developmental outcomes (Clark, 2011). By having conversations about viewed content, parents promote children's critical thinking about digital media.

2.5.3 Social co-viewing.

Social co-viewing, also known as co-viewing (Valkenburg et al., 1999), is perhaps one of the less well defined parental mediation strategies in the context of digital media use (Chakroff & Nathanson, 2011). One of the early definitions of co-viewing referred "to occasions when adults and children watch television together, sharing the viewing experience, but not engage in any discussion about the program" (Valkenburg et al., 1999, p. 54). Research in this area has based its conclusions on the notion of 'social facilitation' arguing that the mere presence of other people especially parents is enough to alter young children's processing of digital media messages such as educational content and advertisements (Krcmar & Cingel, 2014).

Other researchers suggest that co-viewing include discussions about the content of programs during viewing (see e.g., Robb & Lauricella, 2015). Valkenburg et al. (1999) in a review of literature about parental mediation noted that parental co-presence when children view television led to positive outcomes such as feelings of closeness and that children learned about relationships when they watch family programs with their parents. Valkenburg et al. (1999)'s observations about co-viewing echoes findings from Sesame Street studies which suggest that young children glean more lessons from television programs when they view with others than when they view alone (Takeuchi & Stevens, 2011). In contrast, Nathanson (1999) found out that co-viewing alone was not enough to mitigate the effects of television viewing because simply watching violent programs with children has been associated with later aggressive tendencies among children. These two studies are informative because they tell us that research about the developmental outcomes of co-viewing is inconclusive. However, being a socio-contextualist and viewing the role of digital media in family contexts through a critical theory of technology, I am more inclined to Bronfenbrenner's (1979) assertion about the use of digital media in relation to interactive processes that instigate human development. Just sitting together in the presence of digital media without engaging in joint activities may appear to freeze the

interactive processes that socialise young children into the ways of the society (Bronfenbrenner, 2005). I argue that effective co-viewing needs to create conditions in which parents engage in evaluative or active mediation by raising questions, highlighting specific aspects of the programs and having conversations with children. Such a view touches on Clark's (2011) 'participatory learning', Valkenburg et al.'s (1999) 'active mediation', and certainly Takeuchi and Steven's (2011) 'joint media engagement.'

The link between parental co-viewing and learning outcomes of young children is not well established. In an early study, Salomon (1977) investigated the effects of co-viewing on children's learning outcomes when mothers viewed Sesame Street with kindergarten children. Using an experimental research design, Salomon encouraged one group of mothers to 'always co-view' with their children while he instructed the other group to co-view the show as they wished. Salomon did not make any observations of the mothers and children watching Sesame Street with the assumption mothers behaved as instructed to comply with the instructions. The findings of the study indicated that co-viewing had a more significant impact on children from low socioeconomic status as they learned more and enjoyed the show. Salomon (1977), interpreted the improved learning and enjoyment as a result of co-viewing. This finding suggested a possible correlation between co-viewing and affective responses of children to the show when viewing it with their mothers. It appeared that, "the sheer presence of the mother… may have been a source of nonspecific general arousal, thus acting as a general energiser of all responses which were likely to be emitted in the learning situation" (p. 1150). Since Salomon did not observe mothers' interactions with their children during co-viewing instances, it was not possible for him to point out the mechanism or the interaction types that were responsible for the positive developmental outcomes for children. Similar studies have concluded that the presence of the mother alone in the co-viewing session had a social facilitation effect (Krcmar & Cingel, 2014). More observational studies are required to help us understand the types and nature of interactions that foster desired learning and developmental outcomes.

2.6 Studies of Joint Media Engagement

Studies of joint media engagement typically foreground social interaction as the primary mechanism through which young children learn to make sense of the media they use (Lauricella et al., 2017). While research indicates that young children learn more through authentic

interactions with other people around them, the lived reality is that young children are growing up today surrounded by digital media. Not only is digital media enticing, it naturally draws children to it especially when they see their parents and siblings using screens (Wartella et al., 2013). Empirical studies of joint media engagement have suggested that the potential effects of digital media may be mitigated when digital media consumption in families is regarded as a shared activity where parents and young children learn through interchanges (Takeuchi & Stevens, 2011).

The concept of joint media engagement is less than a decade old but has emerged as a trending research topic in early childhood since its inception in 2010 (Takeuchi & Stevens, 2011). Over the last nine years or so, researchers have made significant contributions to its theoretical and empirical understanding, but there is still a lot to learn especially in locations with less empirical work completed, specifically in relation to young children's engagement with digital media embedded in family interactions and relationships. Such locations include developing countries largely concentrated in the global south (Marsh, 2015). In this section, I survey literature about joint media engagement commencing with its historical roots following with how empirical studies' findings informed the topic. In doing so, I aim to identify the knowledge gaps and explain how this thesis attempts to fill some of the identified gaps in the literature.

In the introduction chapter, I highlighted the importance of the home learning environment, especially relating to digital media. It is now widely acknowledged that children are starting to engage with digital media from an early age. Young children first encounter and engage with digital media in the home (Marsh et al., 2018). Studies also consistently show that we have limited understanding of birth-to-three-year-old children's digital media experiences in homes (Nevski & Siibak, 2016; Plowman et al., 2010). However, research is responding by attending to what is happening for young children with regard to digital media. One of the most important concepts attracting attention in research is joint media engagement. Joint media engagement is a relatively new concept not studied widely (Ballagas et al., 2013, February), particularly in the area of early childhood. Joint media engagement, therefore, presents numerous opportunities and possibilities for those researchers interested in exploring digital

media-supported collaborative practices (Ballagas et al., 2013, February) in homes, where the use of digital media continues to rise (Livingstone, 2009a).

The concept of joint media engagement was coined at the Joan Ganz Cooney Centre (named after one of the founders of Sesame Workshop and the creator of the Sesame Street show for young children) in the United States (Takeuchi & Stevens, 2011). Kearney and Levine (2015) explain that Sesame Street was an experimental intervention project that incorporated new ideas in the early 1960s intending to improve learning outcomes for children from disadvantaged backgrounds. According to Kearney and Levine (2015), regardless of typical challenges such as network coverage, Sesame Street was a success. It should be noted however, that some researchers have contested the celebrated success of Sesame Street suggesting that instead of closing the gaps between children from disadvantaged socioeconomic backgrounds and those from well-off families, Sesame Street program widened the inequality (see e.g., Giaquinta et al., 1993). Parents of good socioeconomic standing utilised the show better because they had time to interact with children and possessed the required social envelope resources that helped their children benefit from the show compared to children of parents from disadvantaged background who lacked time and the appropriate social envelope resources to help children draw lessons from the show (Giacquinta et al., 1993). Nonetheless, when Sesame Street first aired in 1969, "researchers both within and external to the Children's Television Workshop (CTW) studied, among other things, the roles parents and others in the room can play in enhancing the viewing experiences of preschoolers" (Takeuchi & Stevens, 2011, p. 6). The findings excited researchers as they showed children learned more when parents co-viewed the show with them, as compared to when they viewed on their own. The implication being that the presence of the parent enhanced learning, perhaps through increased concentration because the children saw the parents were also interested in the program.

During that time, television was the newest mass medium to find its way into people's homes. It was therefore, timely for researchers to investigate the co-viewing experiences within the family home based on television, the concept of co-viewing being tied to individuals viewing television together (Takeuchi & Stevens, 2011). There was no need to consider a wide range of digital technologies since they were not available during that time. Joint media engagement chooses television co-viewing experiences, one of the parental mediation strategies

(Clark, 2011; Valkenburg et al., 1999) as a point of departure (Takeuchi & Stevens, 2011) and seeks to incorporate the ever-increasing range of digital media devices in diverse settings including families. As demonstrated by Takeuchi and Stevens (2011), the research team's intention at the Joan Ganz Cooney Centre extended beyond the television, particularly now that new digital media such as iPods, laptop computers, tablets, game consoles and digital toys saturate homes. Since research on co-viewing predominantly focused on children's viewing experiences associated with television, the concept of co-viewing fails to consider other experiences associated with the wide range of new digital media. Indeed, Takeuchi and Stevens (2011, p. 10) argue that, "…the concept of co-viewing warrants revision in the contemporary media environment to encompass multiple modes of engagement with diverse digital media." Thus, Stevens and Penuel (2010) established the concept of joint media engagement in an attempt to extend social engagement experiences beyond the television and to consider other emerging newer digital media.

Takeuchi and Stevens (2011) drawing on Stevens and Penuel (2010) define joint media engagement as:

> Spontaneous and designed experiences of people using media together. JME can happen anywhere and at any time when multiple people are interacting together with media. Modes of JME include viewing, playing, searching, reading, contributing, and creating, with either digital or traditional media. (p. 9)

Takeuchi and Stevens' (2011) definition of joint media engagement above conceives the use of digital media as a social activity that supports diverse ways of acting with media providing rich possibilities for learning and connecting one another and with the world. Ballagas et al. (2013, February) offer a similar definition of joint media engagement. For them, joint media engagement "describes 'collaborative' consumption of media and has potential learning benefits" (p. 225).

The two definitions of joint media engagement broaden Valkenburg's (1999) conceptualisation of co-viewing, where individuals "watch television together, sharing the viewing experience, but not engaging in any discussion about the program" (p. 54). Robb and Lauricella's (2015) definition of co-viewing differs from that of Valkenburg (1999). Robb and

Lauricella (2016) categorise co-viewing in terms of the level of parental interaction and engagement. In this categorisation, low-level involvement and engagement occur when parents co-view with children without attempting to engage children in interaction about the viewed content. This first part of Robb and Lauricella's (2015) definition of co-viewing echoes Valkenburg's (1999) definition but additionally there is also high-level involvement and engagement, where parents intentionally engage children in discussions by pointing at specific aspects on the screen and asking questions to help children concentrate on the show and learn. This second definition of co-viewing (Robb & Lauricella, 2016), resonates well with Takeuchi and Stevens's (2010) definition of joint media engagement. The definition of joint media engagement embodies collaborative engagements not visible in the digital technologies themselves (Takeuchi & Stevens, 2011). Elaborating on Stevens and Penuel's (2010) definition of joint media engagement, Alper (2011) suggests that parents with young children collaboratively support learning through the modes of joint media engagement. Alper (2011) views intergenerational experiences with media as fundamental resources in joint media engagement practices that stimulate curiosity, interest and passion for learning in young children. This argument is consistent with Marsh et al.'s (2015) conceptualisation of intergenerational digital media literacies in families.

It is important to consider from the outset why the concept of joint media engagement has come into being as a useful concept in post-industrial early childhood research, particularly with regard to digital technologies and media in families. The concept of joint media engagement came from researchers studying digital play (McPake & Plowman 2010), popular culture (Livingstone, 2005; Buckingham & Jensen, 2012; Jenkins, 2006), media convergence (Jenkins, 2006; Edwards, 2013), and active engagement with digital technologies and participatory culture (Jenkins, 2006). Jenkins' (2006) concept of 'convergence culture' is particularly important in the context of this thesis because my study engages with the media content that is digitally distributed and accessed on multiple media platforms, old and new. Media convergence is a technological phenomenon that suggests children can access television content on other media platforms other than the television, such as on mobile phones and on tablets. In children's play, there seem to be no boundaries between digital and traditional playthings or virtual and offline practices (Plowman et al., 2015). The blurred boundaries between traditional and digital play have been well articulated by Hjarvard (2013) who has

examined Lego's transition from traditional blocks to a video game. Hjarvard argues that children can now play the same Lego blocks on a digital platform rather than with the physical blocks. Jenkins (2013) talks about 'spreadable media', a concept which he argues captures the fundamental changes occurring in the contemporary media landscape, with its emphasis on media consumers having a direct influence in the circulation of media content. I am aware of the development from convergence culture to spreadable media. However, I am sticking with the concept of convergence culture in my study because the definition of joint media engagement refers to people using either traditional or digital media together. Convergence culture involves traditional media meeting new media (Jenkins, 2006).

Initially, research about joint media engagement in formal and informal settings including homes, communities, museums, industries, workplaces and schools, occurred predominantly in the United States. For instance, Takeuchi and Stevens (2011) present interdisciplinary case studies on joint media engagement in diverse settings. The authors observe that due to the increase in digital technology devices in children's lives, it is essential to understand how parents and other caregivers utilise digital media to promote children's learning. Pedagogical practices or teaching strategies used by parents during joint media engagement are at the centre of the case studies presented by Takeuchi and Stevens (2011). Many countries, particularly in the global north, but with some emerging literature from the global south such as Taiwan and China, are increasingly conducting joint media engagement research. In one study from the United States, Rideout (2014) investigated the amount of time children spend on educational media, parental perceptions of the content their children engaged with, and joint media engagement patterns in the family home. Rideout found that younger children engaged with educational media more than older children, which could suggest that, as children mature, they expand their social networks and interests to those that are not necessarily educational. Of interest to my study, Rideout (2014) established that joint media engagement frequently occurred, although she did not establish the nature of the observed joint media engagement.

Recently, Huber, Highfield, and Kaufman (2018) examined the changing digital lives of young children by detailing how children use digital media in homes of Australian families. A total of 406 parents responded to the survey that required them to report on young children's digital media ownership, their engagement with both traditional and new media, childrens' digital media preferences, the quantity of media use and the degree to which children used digital media

on their own or with a parent. The findings from the study were quite interesting. Parents reported a higher frequency of joint media engagement at 38.1% compared to children using digital media by themselves which stood at 20.4% suggesting that most parents in Australian homes engage in shared media experiences with young children more as opposed to allowing children to use digital media devices alone. The authors propose that the finding is a positive one because studies have shown the significant role of shared media experiences with parents or caregivers in fostering meaning making because they help scaffold the experiences that assist children to comprehend the materials.

In another study, Wartella et al. (2013) studied old (television, video games, computers) and new (iPads, smartphones) media and the effects of their use on family and parenting practices in homes. Wartella et al.'s (2013) national survey involved a large sample of 2,300 parents with children under the age of 8 years. The findings indicated parents' digital technology use shapes the media environment of the home and that parents value the educational benefits afforded by the technologies, rather than restricting children's access to technology based on potential negative effects. Research about parental beliefs and the opportunities children have to play with digital media suggest a similar trend. O´Connor, Fotakopolou, and Fridberg (2019) reported findings from an online survey completed by 370 parents of children under age three. The parental survey comprised parents from the United Kingdom, Australia, Sweden and Greece. The study aimed to understand young children's digital media experiences in their families. The findings suggested that the beliefs of parents about digital media determine whether and how children experience digital media in the home environment. This study and others exploring parental beliefs suggest that children's digital media experiences including joint media engagement are closely related to parent's perceptions about the role of media in childhood in terms of whether it is beneficial or detrimental to children's well-being. Of great relevance to the present study is the recognition of quality interactions with children when they are using digital media. This finding was most pronounced among the United Kingdom parents who were keen on ensuring their children were learning how to interact and communicate effectively with people around them. A similar study by Johnston and Highfield (2017) established that active engagement through interactions during media use is an effective way of deepening children's thinking. Johnston and Highfield (2017) explored ways in which young children use digital media in outdoor play. The findings show multiple ways digital media facilitates children's outdoor play experiences. For

example, the authors demonstrate how a 6-year-old boy while on the beach with his family notices a small blue-coloured jellyfish and together with his 3-year-old sister use their mother's phone to take a photo of the jellyfish. Later that night he showed his father the photo and they participated in joint media engagement exploring questions about the jellyfish. Studies such as this demonstrate the role of digital media as a new cultural tool for children and adults supporting play experiences in contemporary society.

Researchers of joint media engagement have also been interested in the quality of interactions or relationships among parents and young children during shared media use. In Wartella et al.'s (2013) study discussed above, although 32% of the respondents reported that they enjoyed viewing television and movies together with children, it was difficult to establish the interactive processes that were occurring in the viewing situations because the researchers employed quantitative research design. A qualitative approach would have enabled them to observe the nature and quality of interactive processes involved in joint media engagement. Recently, Chwyl (2018) researched the interactional patterns of parents when using e-books in a museum context in the U. S. Employing a qualitative methodology and joint media engagement as a theoretical framework, she identified three categories of interactional patterns that parents used while reading the e-books with children. The three patterns were: reading convergent, task divergent, and physically absent parents. Of significance to the current study, Chwyl identified scaffolding strategies focused on the book content and technical navigation of the e-books. In general, the scaffolding strategies she identified in this study echoed findings of previous studies and included questions about the content, asking children to label the objects, explaining and elaborating the content, hinting at possible responses, positive reinforcement, and, linking the content of the e-books to children's experiences in real life. Furthermore, she discovered that the museum context had a supporting and inhibiting effect on the shared experiences of e-books. For example, with regard to the facilitative role of the museum, she found that the museum environment enabled the parents and the children to have focused engagement that would not happen at home and that they were able to make links between the e-book content and other relevant museum experiences. On the other hand, the contextual factors in the museum, such as visitors passing, noise and sharing of e-books among children inhibited the shared reading experiences. This study focused on children aged 2-8 years. Given that the context has a facilitative and inhibitory role, this study may not tell us much about joint media

engagement at home. In another related study, Yuill and Martin (2016) studied how children's shared experiences differed between traditional shared book reading and shared e-book reading on screens. The findings indicated no significant variation in children's recall quality between the two mediums. However, the quality of interactional warmth was lower in screen-based situations compared to that observed in traditional book situations. In addition, the quality of interaction differed between child-led and mother-led reading and that the maternal posture during the shared reading supported more shared activity. The findings of this study echo those of Chiong, Ree, Takeuchi, and Erickson (2012) who demonstrated that parents engage in fewer content-related conversations during shared e-book than traditional book reading. One of the observations made by Chiong et al. (2012), about the differences in the quality of interaction is that in the shared e-book reading sessions, parents appear to concentrate more on the mechanics of operating the screen media devices than on the content of the media—the focus in traditional book reading is on the content and this factor makes learning from screens by young children less effective.

Research about joint media engagement has also focussed on the benefits that both parents and children obtain from collaborative use of digital media. Some studies show that learning in joint media engagement is a two-way process that benefits both young children and parents. Much of the research in this area has been about the ways that immigrant families and their children use digital media to help them integrate into new cultures. For instance, Katz (2014) studied joint media use of Hispanic immigrant families in the United States. In this study, she found out that, while on the one hand parents contributed their adult understanding of how the world functions and what was desirable for their families, children, on the other hand, brought into the interactions their English proficiency skills, the US culture, media forms, and media content. She notes that the families engaged in different learning activities, which enabled them to learn from one another, bringing together their collective skills and knowledge to enhance family discussions around media. This finding resonates well with Jenkins' (2006) assertion about learning in a participatory culture that, "None of us knows everything; each of us knows something, and we can put pieces together if we pool our resources and combine our skills" (p. 4). Digital media provide an excellent opportunity for collective meaning making within popular cultural themes in families (Jenkins, 2006). This line of inquiry suggests that both parents and young children contribute their skills to the interactions. This thinking about

learning and development is consistent with the socio-contextual theoretical tenets about learning which puts sustained shared thinking at the centre of young children's conceptual development.

2.7 Conclusion

In summary, I realised that there is a limited understanding of digital media experiences in the family home setting and even less about the birth-to-three-year-old cohort. There is inadequate empirical literature on social and communicative features emerging from joint media engagement between parents and children younger than three years. I therefore, seek to contribute to international understanding on this topic by examining the social and communicative features of joint media engagement together with what those features may tell us about the kinds of learning children obtain in those situations.

CHAPTER THREE: TOWARD A SOCIO-CONTEXTUAL ANALYSIS OF JOINT MEDIA ENGAGEMENT

There is nothing so practical as a good theory. (KURT LEWIN, 1951)

3.1 Introduction

In the previous chapter, I have discussed the literature related to digital media use by young children in the context of ordinary everyday family lived experiences. The argument presented throughout the chapter supports the notion that young children are increasingly conducting their everyday lives with and around digital media with parents employing diverse strategies to help children navigate through the complex media environment. Following in the footsteps of other researchers, I support the calls for joint media engagement, especially with young children who lack enough sociocultural experience to critically consume and make sense of digital media on their own. Upon reviewing the literature about joint media engagement, I have been surprised to learn that the accumulated understanding of the topic is quite narrow and undertheorised. For example, I have concluded that accounts of joint media engagement are primarily descriptive rather than analytical. This study, therefore, calls for a close examination of the social and communicative aspects in interpersonal interactions enabled by digital media involving young children and their parents in home settings—an undertaking that may help uncover the learning opportunities inherent in the collective use of digital media. The research, paying attention to the social and communicative features taking place in joint media engagement requires coherent theoretical frameworks that consider contextual changes in society's knowledge systems and needs as well as the interactions with existing technologies when carrying out everyday activities. An undertaking such as this may require researchers to blend a variety of theoretical perspectives attending to historical transformation of knowledge, identifying the technologies that support the accumulated ideas and ways in which new knowledge and new technologies, transform our everyday engagement with society and culture.

The chapter has two goals, addressed in two different sections. The first is to outline the theoretical and conceptual foundations of scientific inquiry in terms of the dominant worldviews that guide research in the social sciences. After outlining the convictions of the two dominant

worldviews in social science research, that is, mechanism and contextualism, I position myself within the contextualistic worldview.

The second section explicates the broad contextual approaches employed by researchers to theorise the relationship between technology and society in general narrowing down to digital media in families and early childhood. I then attempt to design a socio-contextual theoretical approach useful in studying joint media engagement reviewing everyday uses of digital media by young children and adults in families. I do this by explicating three socio-contextual theoretical tenets useful for the analysis of shared sociocultural activities, including shared digital media experiences of young children in families. The three socio-contextual theoretical tenets to be discussed later in the chapter include:

i) The social origin of psychological processes,
ii) The primacy of sociocultural activities, tasks and practices, and,
iii) The idea of cultural mediation.

In this socio-contextual approach, I show that digital media reflects the material conditions characterising the present historical epoch and as such, the media deeply entwine throughout early childhood life worlds reflected by the numerous digital media activities of young children in their contexts. Digital media represents the actual forms of culture for the present generation of children and young people through which they make sense of and organise their life worlds. In addition, I show that the ecological features of the activity settings in which young children encounter and use digital media have an organising and structuring quality. To clarify, I mean that the ecological features of activity settings organise children's activities, both affording some actions and activities and inhibiting others. I will elaborate on these concepts throughout this chapter.

3.2 Conceptual Foundations of Scientific Inquiry

The objective of doing research is to advance knowledge (Bronfenbrenner & Morris, 2006) on a particular subject matter or topic (Guba, 1990). Researchers hope that, in addition to enhancing the understanding of particular social issues or phenomena, the findings emanating from their research activities may also be used to improve the living conditions of the studied groups (Guba & Lincoln, 2008) such as families and young children (Bronfenbrenner, 2005)

through policy design and service provision (Patton, 2015). These aims are true for both qualitative and quantitative researchers. Moving science forward through the advancement of knowledge entails using research strategies and methods that correspond to the key principles of the theoretical frameworks researchers use (Bronfenbrenner & Morris, 2006). Let me briefly revisit Kurt Lewin's provocative quote I have cited at the beginning of the chapter and foreground its implications for researching young children's interpersonal interactions and communication with and around digital media in diverse settings. Lewin (1951) aptly stated that, "there is nothing so practical as a good theory" (p. 169). Lewin (1951) was genuinely interested in understanding the philosophy of science and how that understanding would guide individual researchers in developing 'field methodologies' capable of illuminating social problems facing humanity. What is clear in Lewin's (1951) dictum is that theories have underlying assumptions that link them to principles of field methodologies.

In his quest to solve humanity's social problems, Lewin (1951) believed the problems people face could be solved by applying relevant theoretical concepts. For him there was a strong link between social life and theory and research was supposed to address real life issues such as poverty, inequality and the like. Writing about Lewin's biography, Marrow (1969) stated that:

> Theory was always an intrinsic part of Lewin's search for understanding, but theory often evolved and became refined as the data unfolded, rather than being systematically detailed in advance. Lewin was led both by data and theory, each feeding the other, each guiding the research process. (p. 128)

This account of Lewin provided by Marrow (1969), illuminates the dialectical nature of Lewin's research work where data and theory mutually inform each other. Drawing on Lewin's assertion several years later, Bronfenbrenner and Morris (2006) suggested that for a theory to be good, it must also be practical. Bronfenbrenner and Morris (2006) proposed two main criteria for judging the practicability of theories. First, a theory is practical if it can analyse a phenomenon that it presumes to explain as manifested in the setting in which it occurs. This assertion about analysing phenomena as manifested in real life conditions paves the way for naturalistic case-based methodologies (Stake, 1995, 1998, 2010). Second, a theory is said to be practical if it "can be translated into corresponding research designs" that can be used to

examine and understand social and psychological phenomena as it unfolds in its natural environment (Bronfenbrenner & Morris, 2005, p. 796). I will return to these points in the next chapter when I present the research design and methods used to research joint media engagement in eight selected families in Kenya's Nairobi County.

In line with Lewin's (1951) provocation, Tudge (2008), heavily influenced by Vygotsky's and Bronfenbrenner's work, called for "theoretically driven research, with links between our basic assumptions about the world (our meta-theory), the theory we use, the methodology employed, and the way we analyse our data" (p. 56). Tudge's argument implies that researchers ought to try to obtain a good fit between one's philosophical stance and the choices one makes of theory, methodology and methods of data generation and analysis (Merriam, 1998; Stake, 1995; Yin, 2018). If researchers make methodological decisions without conscious consideration of the underlying assumptions, they are likely to employ theories, research approaches, and methods that do not sit comfortably with each other (Merriam, 1998; Stake, 1995).

The preceding claims raise a fundamental question in the research enterprise: How do researchers choose theories and corresponding research designs, data generation and analysis methods? How do you as a researcher know you are making the right choices? To understand how theories, methodologies and methods relate to each other, one must have a basic understanding of the philosophy of science (Berger & Luckmann, 1966; Kuhn, 1962). Having a clear understanding of philosophical assumptions underpinning theories and methodologies is the starting point for making appropriate choices in research. Both qualitative and quantitative researchers confront questions of ontology, epistemology and methodology that undergird scientific investigations (Guba, 1990; Lincoln & Guba, 1985; Merriam, 1998; Stake, 1995, 1998). There are several schools of thought producing meta-theoretical paradigms or worldviews denoting different ontologies, epistemologies, and methodologies, some of which may be incompatible (Denzin & Lincoln, 2008). The incompatibility of methodologies implies that methods used in a particular paradigm may not be suitable in another paradigm; researchers need to consciously consider choosing methods that fit their chosen paradigm (Tudge, 2008).

3.2.1 My research journey: A struggle with ontology, epistemological, axiological, and methodological questions.

Research methodologists observe that ontological, epistemological, ethical and methodological questions may be unfamiliar to novice researchers, particularly those beginning their research careers (Guba, 1990; Guba & Lincoln, 1994; Lincoln & Guba, 1985, 2013). I must admit from the outset that, presumably as with many students embarking on doctoral research journeys, I struggled with epistemological, ontological, and axiological questions and their relationship with the choice of theoretical frameworks, research methodology, and data generation and analysis methods. I did not consider these issues during my master's research project nor did anyone bring this mode of thinking to my attention during that time. Researching the ways preschool teachers supported children's science learning in two nature preschools in Oslo, Norway, I applied Vygotsky's sociocultural ideas about learning and development and analysed my video and interview data from an interpretivist perspective. Even though the idea that knowledge socially constructed through mediational means concerned me, I did not explicitly state the kind of philosophical beliefs I held. Indeed, the assumptions I had about teacher's work in early childhood services and how young children learn, unconsciously crept into my theoretical and methodological choices in the process of researching and writing up my thesis (Corbin & Strauss, 2015).

When I enrolled for the doctorate, my thinking relating to epistemological, ontological, and axiological beliefs and how they influence research activities developed. From the beginning, my supervisors raised the need to make my ontological, epistemological and axiological commitments known explicitly. Since that point in time, I have come to learn and appreciate how our conceptions about knowledge and reality shape how we perceive the social world and certainly, the strategies we adopt in researching that world.

3.2.2 Belief systems in qualitative research.

Many research methodologists consistently argue that research is guided by 'world hypothesis' or 'worldviews' or 'paradigms' or 'belief systems' held by researchers (Guba, 1990; Guba & Lincoln, 2008) regardless of the field or discipline of inquiry (Merriam, 1998). Paradigms are philosophical positions or as Denzin and Lincoln (2008) aptly state, "[a] basic set of beliefs that guide action" (p. 245). A philosophical stance or paradigm is a "net that contains

the researcher's epistemological, ontological and methodological premises" (Denzin & Lincoln, 2005, p. 22). Researchers use the philosophical premises to justify their choice of theory and methods in their research (Bryman, 2012; Merriam, 1998; Stake, 1995; Yin, 2009). Creswell (2013) informs us that "philosophical assumptions are typically the first ideas in developing a study" (p. 16). Reinforcing Creswell's position, Taber (2014) posits that "methodological decisions in educational research are informed by axiological as well as ontological and epistemological considerations" (p. 1863). Researchers need to think about the beliefs about knowledge, reality and values they bring into a research situation. Merriam (1998) and Grix (2010) remind us that whether we are or are not consciously aware of our philosophical positions, we as researchers usually bring them to our research activities.

According to Denzin and Lincoln (2008), paradigms are defined in terms of the four components they comprise: ontology, epistemology, methodology and axiology. *Ontology* is the point of departure for any form of inquiry "after which epistemological and methodological assumptions logically follow" (Grix, 2010, p. 59). Ontological assumptions are concerned with the researcher's theoretical understanding of the nature of reality and the features that define its existence (Bryman, 2012; Creswell, 2013). Ontology examines the question, "What is the nature of the 'knowable'?" (Guba, 1990, p. 18). Denzin and Lincoln (2008) establish that "ontology raises the basic questions about the nature of reality and the nature of the human being in the world" (p. 245). Ontology in both quantitative and qualitative traditions is concerned with what the researcher believes constitutes social reality (Berger & Luckmann, 1966). Generally, ontological questions are concerned with the object of investigation, that is, what the researcher is studying. Bryman (2012) argues that,

> The central point of orientation here is the question of whether social entities can and should be considered objective entities that have a reality external to social actors, or whether they can and should be considered social constructions built up from the perceptions and actions of social actors. (p. 32)

As I will explicate later, implicit in Bryman's (2012) quote is that some researchers, proceed from the assumption that reality is external to human actors, while for others, human actors construct reality through social interaction with one another and with the conditions provided by the environment. *Epistemology* addresses the question—what and how can we

know about what exists? (Grix, 2010). According to Crotty (1998), epistemology is "the theory of knowledge embedded in the theoretical perspective and thereby in the methodology" (p. 3). It is concerned with what individuals regard as knowledge about social phenomena (Bryman, 2012; Denzin & Lincoln, 2011; Grix, 2010; Mason, 2002). More specifically, epistemology examines the relationship between the 'knower' and the 'knowable' (Denzin & Lincoln, 2005; Guba, 1990; Guba & Lincoln, 1994, 2008). *Axiology* is concerned with ethical values and beliefs in research (Denzin & Lincoln, 2011). Some researchers argue that every research process is value-laden because investigators bring their value systems into their studies (see e.g., Bryman, 2012; Corbin & Strauss, 2015; Creswell, 2013; Patton, 2015) especially in the conception of the research problem, decisions about the target population and sample, and even in the formulation of research questions (Corbin & Strauss, 2015). Most often, researchers choose to declare one of the two contrasting stances to explicitly clarify their values, that is, whether the study is value-dependent or independent of the researcher's influence (Guba & Lincoln, 1994). The issue of declaring one's biography is particularly important in qualitative research (Creswell, 2013; Grix, 2010; Lincoln & Guba, 1985). *Methodology* addresses the 'how' question. After taking a position on the above three elements—ontology, epistemology and axiology, the researcher then goes ahead and asks the question, what are the best means to obtain reality? (if by any chance it exists) (Bryman, 2012; Denzin & Lincoln, 2011; Guba, 1990; Guba & Lincoln, 1994, 2008). Methodology answers the question "How should the inquirer go about finding out knowledge" (Guba, 1990, p. 18) about the 'knowable'?

Having elucidated the four philosophical components that define theoretical paradigms, I wish to include a few words about the essential principles of paradigms commonly used in social and human sciences. Researchers use a variety of conventional and emerging paradigms in social and human sciences' research (see e.g., Guba, 1990; Guba & Lincoln, 1994; Guba & Lincoln, 2008; Lincoln & Guba, 1985). For instance, Guba and Lincoln (2008) explicate the differences between the traditional positivism and the other four paradigms, namely, post-positivism, critical theory, constructivism, and, participatory action frameworks that have emerged within the last three decades and are competing for legitimacy over positivism. In his book *World Hypotheses: A study in evidence*, Pepper (1942) presented four relatively stable and adequate world hypotheses each stemming from a district common-sense 'root metaphor.' Implicated in Pepper's (1942, 1982) 'root metaphors' is the way individuals understand and

explain reality in everyday experiences. Each of the 'root metaphors' is based on a distinct set of ontological and epistemological assumptions about social reality and having implications on methodological choices. The four world hypotheses he discussed include formism, organicism, mechanism, and contextualism. Pepper (1942) identified 'similarity', 'living organism', 'a machine', and a 'historic event' as the root metaphors for formism, organicism, mechanism, and contextualism respectively.

The terms 'world hypotheses', 'worldview', 'paradigm', 'meta-theory' and 'philosophical assumptions' are characteristically used synonymously in research methodology literature, so are not distinguished here. I will use the terms interchangeably to signify the way in which we interpret the world. I also wish to note that researchers may choose different paradigms in different research projects. The nature of research questions posed by an investigator determines the philosophical paradigm s/he is likely to use for that particular research (Corbin & Strauss, 2015; Crotty, 1998). Moreover, disciplinary differences also play a significant part as inquirers in some disciplines may favour particular worldviews that organise intellectual activities (Kuhn, 1962; Tudge, 2008; Tudge et al., 2011), because individuals working in a particular field or discipline learn the historical methods of their trade as they study and practice with certain paradigms (Kuhn, 1962).

Drawing on Pepper's (1942) world hypotheses, Gillespie (1992) explains that mechanism had been a dominant worldview in mainstream developmental psychology for many years. During their time, developmental psychologists such as, Lev Vygotsky, Jerome Bruner, James Gibson, were dissatisfied with the utility of mechanistic and reductionist approaches to understanding human development in context and they felt that developmental psychology required a new research paradigm that would respond to the social problems of the time. Gillespie (1992) called for an expanded view of examining developmental processes with the inclusion of a contextualistic research paradigm as a robust alternative framework for developmental research. More than a decade later, Tudge (2008) concluded that contextualism had entered into the mainstream of developmental psychology research. Tudge (2008) observed that mechanism and contextualism, were the most commonly used worldviews during the period preceding his publication.

Since mechanism and contextualism are the most commonly used worldviews in developmental psychology (Tudge, 2008), I would like to explicate their central claims about knowledge and reality. The mechanistic worldview is largely associated with Guba and Lincoln's (2008) post-positivism (Hayes, Hayes, & Reese, 1988; Morris, 1988, 1991; Tudge, 2008; Tudge et al., 2011; Tudge & Hogan, 2005), while contextualism corresponds with "transactionalism, constructionism/constructivism, and perspectivism." (Morris, 1988, p. 191). I do not compare and contrast the two worldviews because, as Denzin and Lincoln (2008) and Hayes et al. (1988) advise, doing so is unfruitful. I agree with Hayes et al. (1988), who contend that "Using ontological and epistemological claims of contextualism "to analyse and criticise" mechanism "is illegitimate and inherently useless" (p. 98). What I choose to do instead is to highlight the core principles that underlie them. As I will make it clear in later sections, my preference is contextualism—which I will call *contextual constructionism* because its claims about knowledge and reality align with those of constructionism (Denzin & Lincoln, 2018). Contextual constructionism is rooted in cultural-historical and socioecological theories (Tudge & Hogan, 2005). I prefer to use Pepper's (1942) contextualistic worldview because of its root metaphor which (Reese, 1991) extends to include a "concrete act ongoing in a context" (p. 189). Morris (1998) also interprets Pepper's (1942) 'historic event' metaphor of contextualism as an "ongoing act-in-context." (p. 299). I argue that Joint media engagement is essentially an ongoing activity in its cultural, historical, social, institutional, and material conditions of human existence.

3.2.2.1 Mechanistic worldview.

According to Pepper (1942), mechanism uses a 'machine' as its root metaphor to understand the social world. Proponents of the mechanistic worldview subscribe to critical realism ontology and objective epistemology (Gillespie, 1992). This worldview assumes that the world, including the phenomenon of human development, functions like a machine in such a way that the parts of a machine interact with one another based on specific laws that lead to the proper functioning of the whole machine (Pepper, 1942; Hayes et al., 1988; Reese, 1992; Morris, 1998). The role of the scientist is to establish cause and effect links. This school of thought emerged as an alternative to naïve realism after acknowledging that the philosophical ideals of naïve realism could no longer be sustained (Crotty, 1998). Mechanists reject the idea that there is an absolute reality (Guba, 1990). The ontological position of mechanists remains as

realism though it moves from the traditional 'naïve' realism to contemporary 'critical' realism. The mechanistic tradition, rooted in critical realism ontology and modified objective epistemology, holds that although reality exists out there independent of the observer, it is not possible "for humans to truly perceive it with their imperfect sensory and intellectual mechanisms" (Guba, 1990, p. 20). At best, reality or truth can only be estimated or approximated (Denzin & Lincoln, 2008; Guba & Lincoln, 2008). Epistemologically, mechanists or post-positivists 'root' for modified objectivity, which is a 'regulatory ideal' and not objectivity in the absolute sense of the term (Denzin & Lincoln, 2005).

Durkheim (1964) believed that "social facts must be studied as things, that is, as realities external to the individual" (p. 37). As the entities studied are assumed to be independent of the researcher, it is possible for him or her to study such entities without influencing them or being influenced by them (Lincoln & Guba, 2000; Merriam, 1998). Researchers working within this school of thought argue that they avoid bias or human frailty by carefully designing their investigations and controlling variables that may creep into the study and influence the outcomes (Guba & Lincoln, 2008). It then follows that experimental and manipulative methods of inquiry are appropriate for discovering social reality (Hayes et al., 1988). Methodological 'multiplism' is a central doctrine in a mechanistic or post-positivistic worldview (Guba & Lincoln, 2008). This means that researchers use a variety of methods to arrive at valid and reliable findings.

3.2.2.2 Contextual constructionist worldview.

Contextual constructionism is rooted in Dewey's pragmatism (Dewey, 1938) and the broader hermeneutics philosophical principles that emphasise human *action* as core to interpreting everyday lived experience (van Manen, 1990). Contextual constructionism uses the root metaphor of a 'historical event' as a focal unit of analysis (Pepper, 1942). Pepper's followers such as Hayes et al. (1988), Reese (1991), and Morris (1988) expanded his initial conception of 'historical events' to invoke 'ongoing actions or activities' in context. Contextual constructionism is founded on the principles of relativist ontology, transactional or interactional epistemology (Tudge, 2008) and a hermeneutic, dialectical methodology (Creswell, 2013; Lincoln & Guba, 2000). Adherents of this worldview do not subscribe to the idea that there is a single reality. They believe that there are multiple realities as there are contexts in which

humans inhabit (Creswell, 2013; Creswell & Poth, 2018; Yin, 2016). Furthermore, researchers adopting this worldview reject the notion that reality exists independent of the knower (Creswell, 2013). Knowledge is socially constructed and re-constructed as individual members of a culture interact and assign meaning to the activities in which they engage (Bryman, 2012; Grix, 2010; Merriam, 1988, 1998). The researcher, being the instrument of data generation, is actively engaged in this process of meaning-making and cannot be independent of the social phenomenon and the culture being studied (Guba & Lincoln, 2008). Researchers employing these ideas in their research understand that research is a dynamic process that is continuously influenced by their biographies and those of research participants: gender, sex, social class, ethnicity, race, personal experiences and other contextual parameters (Denzin & Lincoln, 2018).

Based on the dynamic and complex nature of family life, contextual constructionism analyses and represents joint media engagement adequately. The metaphor of 'historical ongoing activities' in context invokes the idea that "each interaction is the unique product of past activity in the current context, as well as being the historical context for the next interaction" (Morris, 1998, p. 292). I argue that the analysis of joint media engagement is contextual constructionist in worldview and must be treated and studied as such. In summary, inherent in this contextual constructionist analysis of joint media engagement is the holistic quality in which neither young children, parents, nor digital media can be investigated and understood in isolation. The analysis of joint media engagement involves considering the synergistic dynamic interpersonal interactional processes as a unit during analysis, because the mutual and reciprocal interpersonal processes constitute joint media engagement. I now turn to theoretical perspectives that derive from contextual constructionism.

3.3 Approaches to the Contextual Analysis of Digital Media Practices

Media effects research and theory has primarily concerned itself with how media influences the behaviours of individual audiences without considering the social contexts in which media consumption occurs (Lull, 1990; Morley, 1988, 2007, 2012). Early childhood research such as that considering screen time, has pathologised young children's leisure time, encouraging alarmist media and initiating public panic, while largely omitting the role of context in shaping the media experiences of young children (Takeuchi & Stevens, 2011; Plowman, 2016). All along though, there have been sustained calls for researchers to consider

the contexts in which digital media is accessed and used (Brody & Stoneman, 1983; Morley, 1986; Stoneman & Brody, 1992; Piotrowski, 2017; Plowman, 2016). Despite an understanding that the social circumstances in which digital media is accessed and utilised, determine the extent to which media changes society and culture, very few researchers have incorporated analytic frameworks that considers contextual variables as fundamental informers of media use (Piotrowski, 2017). Piotrowski (2017) observes that quantitative analysts try to control contextual factors instead of evaluating how those factors intervene and mediate the relationship between digital media and individual users. Researchers calling for the incorporation of contextual conditions to understand the role played by media in human life acknowledge that technology functions through a nexus of mediating conditions including individual, contextual and technical factors (Brody & Stoneman, 1983; Lull, 1990; Morley, 2012).

The contextual analysis of digital media practices of children younger than three years has been largely neglected (Nevski & Siibak, 2016). This category of children has remained invisible in research, though is an important digital media audience as shown by increasing efforts by media producers to create media content through "apps" that target them (Marsh et al., 2018; Nevski & Siibak, 2016; Zack & Barr, 2016). One factor that may account for the limited reports of young children's digital media practices is the view that young children are 'digital natives' (Prensky, 2001, 2005). According to Prensky (2001), digital natives refer to a generation of children born after 1984, who have grown up immersed in an ensemble of digital media technologies. The constant exposure to digital media he argues has endowed this generation of children and young people with unique characteristics and competencies that make them a different generation compared to those born before 1984, the 'digital immigrants.' I challenge the accuracy of this assertion as some studies of everyday uses of digital media by young children show that social and cultural factors play a significant role in how children learn to be competent users of digital technologies (Plowman, 2015, 2016; Plowman & McPake, 2013; Plowman, McPake, & Stephen, 2008; Plowman & Stephen, 2007; Plowman & Stephen, 2013; Plowman et al., 2010b).

Prensky's (2001) claims about 'digital natives', and 'digital immigrants' have attracted vigorous critiques by researchers such as Selwyn (2012) who argues that the notion of 'digital natives' lumps together the digital media experiences of all children regardless of resource base

in their families and some parts of the world. Selwyn (2012) observed that at best the 'digital natives' rhetoric masks the lived contextual realities of young children's practices related to technologies and does inhibit research efforts to understand what children actually do with digital media in their unique circumstances. Selwyn's (2012) understanding that children's experiences of media may vary widely based on factors such as educational levels, and the economic base of families, encourages researchers to consider the contextual uses of digital media by young children that accounts for the social and cultural factors present when accessing and using these technologies.

Different approaches are in use in studying young children's engagement with digital media. Interestingly, contextual studies of digital media did not commence in early childhood nor in the area of education. Early contextual research as regards technologies began in the field of human-computer interaction (Bødker, 1997; Kaptelinin, 1996; Kaptelinin & Nardi, 2006, 2012; Nardi, 1996). Researchers pursuing this line of research to understand the role computers play in human activity approached this from a cultural-historical activity perspective (Bødker, 1997). The computers in their research were conceptualised as *artefacts* that mediate human experience (Bødker, 1997; Kaptelinin, 1996; Nardi, 1996; Nomikou, Leonardi, Radkowska, Rączaszek-Leonardi, & Rohlfing, 2017). It is unfortunate that human-computer interaction studies largely ignored young children. I note intensified efforts to popularise research about child-computer interaction and interaction design for young children (Read & Bekker, 2011, July). Such efforts include establishing a dedicated international *Journal of Child-Computer Interaction* whose aim is to communicate high quality research in this emerging field.

In recent years, learning scientists have become increasingly interested in understanding young children's use of digital media in context. In the area of early childhood research, Edwards (2010, 2013, 2016), Plowman and Stephen, (2007, 2013), Plowman, Stephen and McPake (2010b) approached the study of digital media from cultural-historical and sociocultural perspectives to understand the social support young children receive to learn with digital technologies. Recently, there have been efforts to understand digital media experiences of young children from ecological and sociological perspectives (Arnott, 2016; Edwards, Henderson, Gronn, Scott, & Mirkhil, 2017; Marsh, 2017, 2018; Plowman, 2015, 2016; Takeuchi, 2014). For instance, Marsh (2017) employed ecological and sociological perspectives to examine parents'

engagement in young children's use of tablets in homes. Plowman (2015) on her part has approached this subject from an ecocultural lens to understand the typical activities of young children with digital technologies. Edwards et al. (2016) applied a socioecological perspective by integrating cultural-historical (Vygotsky, 1978) and ecological (Bronfenbrenner, 1977) constructs in their study of the digital difference between home and preschool settings. Edwards et al. (2016) argued that socio-contextual frameworks derive from Vygotsky's seminal work, particularly on the role of mediational means in transforming and shaping human psychological functioning.

These studies make a significant contribution to our understanding of the relationship between digital media and children because they have, for the most part, studied the varied ways children and families use digital media, to foster multimodal digital literacies (Arthur, 2005; Marsh, 2005, 2017; Marsh et al., 2015; Marsh et al., 2018), rather than being concerned with the effects digital media have on young children. However, these studies have not recognised, at least explicitly, the idea that the material conditions of a society at a particular point in time determine the dominant practices human beings engage in and as a result, their psychological processes transform leading to new knowledge. The new ideas or knowledge acquired from the new practices arising from the use of the available cultural materials lead to the transformation of those materials into new ones again. This understanding recognises the mutual relationship existing between digital media and society in such a way that one cannot understand digital media independent of society and vice versa. Stephen and Edwards (2018), adopting a cultural and critical perspective of understanding children's media use, pointed to this direction of seeing digital media as part of the material condition of childhood which certainly determine the social and cultural practices of children. From my understanding of the research, the relationship between digital media and young children based on cultural materialist and socio-ecological perspectives of digital media focuses on the historical transformation of knowledge and evolution of tools and how the emerging tools transform practices and thought processes.

3.4 Socio-Contextual Approaches to the Study of Joint Media Engagement

There is an increasing appreciation that the context in which young children encounter and use digital media is as important as the content of media they consume (Lauricella et al., 2017; Marsh, 2017; Plowman, 2016). As a result of this recognition, researchers have been

challenged to gather more empirical evidence in real-life situations where the majority of children first encounter and use digital media (Marsh, 2017; Plowman, 2013, 2015, 2016). One such context where children first encounter digital media is the home (Arnott, 2016; Edwards et al., 2017; Lauricella et al., 2017; Marsh, 2017; Marsh et al., 2015). The focus on ordinary, everyday situations where children encounter and use digital media suggests an approach allowing close examination of how contextual factors shape children's digital media experiences (Lauricella et al., 2017; Marsh, 2017, 2018). Researchers who research along this line use a variety of theoretical frameworks that consider the contextual and social influences in diverse settings such as homes and preschools (see Edwards et al., 2016; Plowman et al. 2015). One such framework is the socio-contextual perspective. Socio-contextual theoretical orientations used as analytic frameworks for understanding children's life experiences in ways that take the historical, social, cultural, and institutional conditions into account are becoming common (Edwards et al., 2017; Hedegaard, 2009, 2018; Hedegaard & Chaiklin, 2005) not least in the study of digital media and digital play in early childhood (Lauricella et al., 2017; Marsh, 2017; Plowman, 2016).

My aim in this section is to outline a socio-contextual approach drawing on cultural-historical views and socioecological factors as one possible analytic tool for researching joint media engagement in families. I argue that socio-contextual approaches should consider digital media as part of the material conditions of childhood in the contemporary world implicated in the process of transformation of childhood practices and psychological characteristics of young children for better or for worse. In recent times, research has focused on the digital media themselves as if it is the only variable influencing young children's cognitive, socio-emotional, social, physical and language development. However, what we know from socio-contextual literature is that social and cultural factors determine the impact of digital media on young children's development and well-being (Marsh, 2017; Plowman, 2016; Plowman, McPake & Stephen, 2007; Takeuchi & Stevens, 2011). Socio-contextual approaches acknowledge the constraining as well as enabling materiality of digital media in the lives of families and young people (Hutchby, 2001). By implication, researchers should consider social, cultural, and ecological features involved in the shaping of digital media when analysing learning and development in context. As I have already suggested, my socio-contextual analytic framework has a basis in cultural-materialist epistemology, particularly cultural-historical theory

(Vygotsky, 1929, 1997a, 1997b, 1998) and socioecological systems theory (Bronfenbrenner, 1977, 1979, 1990, 1993; Bronfenbrenner & Morris, 1998, 2006). My proposal may not be revolutionary because the ideas I am proposing are well developed and have been used in other areas, though less so in studying young children and digital media.

Socio-contextual analysis of human learning and psychological adjustment begins with an assumption that the existence of species Homo sapiens transpires through culture and society (Sorokin, 1947). Sorokin (1947) proposed that individual development arises from forms of sociocultural organisation. As I argue throughout this chapter, socio-contextual theoretical formulations for understanding and theorising digital media experiences in childhood begins "with an analysis of the interactional and cultural systems in play in a particular context and then investigates how any particular" [digital media] "is fitted into them," [instead of] "starting with the internal essence of a technology and then attempting to deduce its effects from its technical specifications" (Morley, 2012, p. 80). Analysing the role played by digital media in young children's lives in this way echoes the understanding of technology through a critical perspective discussed in the previous chapter. My conceptualisation of socio-contextual perspectives was designed to be broad enough to incorporate a wide range of views that theorise joint sociocultural activities in everyday settings. Even though I gleaned my focal organising ideas from Vygotsky's and Bronfenbrenner's work, I also drew on other work which extended cultural-historical and socioecological theories. Those other theories include: sociocultural theory (Bruner, 1985; Penuel & Wertsch, 1995; Rogoff, 1993, 1995, 2003; Rogoff et al., 1993; Wertsch, 1991, 1994) eco-cultural theory (Tudge, 2008; Tudge & Hogan, 2005; Weisner, 2002, 2013), mediated discourse (Scollon, 1998), cultural psychology (Cole, 1995), and situated learning (Lave & Wenger, 1991). Most of these theories draw their inspiration from cultural-historical and socioecological thinking about human psychological functioning.

The ease with which these theories coalesce to explain the socio-contextual understanding of joint media engagement is due to their shared interest in the dynamic relationships existing among social actors, mediated activities, and contextual factors or features (Bronfenbrenner & Ceci, 1994; Bronfenbrenner & Morris, 2006; Rogoff, 2003; Rogoff et al., 1993; Scollon, 1998; Vygotsky, 1978). These theories foreground two proximal developmental processes that drive learning: a) social interaction, and b) engagement in progressively more

complex sociocultural activities and tasks (Bronfenbrenner, 2005; Bronfenbrenner & Ceci, 1994; Bruner, 1985; Penuel & Wertsch, 1995; Rogoff, 1993, 2003; Rogoff et al., 1993; Vygotsky, 1929, 1978, 1994; Wertsch, 1991, 1994). Bronfenbrenner and Morris (1998, 2006) argue that proximal developmental processes are the engines for learning and psychological adjustment. The use of the word 'proximal' may be confusing for those not conversant with Bronfenbrenner's latest work which he called bioecological framework of human development (Bronfenbrenner, 2005), so this concept and its related processes will be clarified in the remaining part of the chapter.

3.4.1 Vygotskian thinking about learning and development.

Vygotskian ideas have become important organising concepts in theorising learning in early childhood. McLean and Edwards (2016) observe that cultural-historical theory, also known as sociocultural theory, is widely used by researchers in understanding digital technologies in early childhood. Developed in the late 1920s and early 1930s by the Russian psychologist Lev Vygotsky and his colleagues, the theory did not have a significant impact outside Russia until the 1960s (because of the political situation in Russia before then), when his work was published and circulated in the Western world (John-Steiner & Mahn, 1996). Vygotsky's cultural-historical thinking about the social formation of psychological functioning arises from the nineteenth-century social theory in the work of Marx and Hegel (Vygotsky, 1978). Marxist intellectual tradition works on the assumption that the mental life of human beings is social and historical in origin (Wolff, 1981).

Soviet Union psychologists were deeply interested in the social and cultural foundation of human psychological functioning (Luria, 1928, 1976; Vygotsky, 1929, 1978, 1997a). Spearheaded by Vygotsky and his colleagues they developed a cultural materialist perspective believing that "important manifestations of human consciousness have been directly shaped by the basic practices of human activity and the actual forms of culture" (Luria, 1976, p. 3). This kind of thinking certainly arose from German ideological thinking about political economy put forth by Karl Marx. Marx (1959) interpreting the historical evolution of man believed that dialectical materialism was the most appropriate methodology through which the evolution of human society would be grasped (Marx & Engels, 1967, 1970). Marx (1959) contended that:

> The mode of production in material life determines the general character of the social, political, and spiritual processes of life. It is not the consciousness of men that determines their existence, but on the contrary, their social existence determines their consciousness. (p. 20)

In the quote, Marx implies that the material conditions of man at a particular point in time are decisive in determining people's conscious. In other words, thought processes or rather mental concepts flow directly from human social relations and material activities (Wolff, 1981).

Marx's dialectical materialism formed the intellectual base on which Vygotsky and his colleagues built their conceptions about the study of sociocultural phenomena (Bruner, 1985; Luria, 1928, 1976; Vygotsky, 1962, 1978, 1997a, 1997b). Vygotsky (1978) argued that understanding young children's development is mutually dependent upon the real-life conditions in which those children live—development is inseparable from the context in which it arises. The ordinary life, activities and practices of people were central in Vygotsky's formulation of cultural-historical understanding of higher forms of behaviour that are unique to species homo sapiens (Vygotsky, 1978). Indeed, Vygotsky and his colleagues carried out psychological experiments about young children's speech, and thinking executed in sociocultural contexts where children lived because they believed speech and thinking were shaped by what transpired in the historical and social contexts of life (see e.g., Luria, 1976; Vygotsky, 1978). These studies utilised the unequal social changes that were taking place in society as a platform for natural experiments to understand the effect of social change on psychological adjustment (Luria, 1976). As such, Vygotsky believed in the unity of consciousness and activity with consciousness located in everyday activities, routines and practices of people. To understand this unity of consciousness and activity, Vygotsky (1978) focused his analytic priority on the *process* of the development of higher forms of behaviour and not the developmental *outcomes* themselves. He contended that researchers need to concentrate not on "the *product* of development but on the very *process* by which higher forms are established" (Vygotsky, 1978, p. 64). This understanding of prioritising the process of human development is also a key consideration in socioecological theories as will be evident in the work of Bronfenbrenner (1977, 1979, 1992, 2005).

Vygotsky detailed an approach to psychological functioning emphasising its inherent historical, cultural, social, and institutional contexts (Erstad & Wertsch, 2008; Wertsch, 1991, 1994). Central to Vygotsky's ideas was the history of humankind represented by culture and the history of the child as expressed in development (Bodrova, 1997). Bodrova (1997) argues that, for Vygotsky, the history of humankind and the history of the child closely connect in such a way that understanding an individual's development necessitates consideration of their cultural context. Bodrova (1997) explains that:

> The relationship between the child and the environment has a dynamic nature, different for different age periods and for different cultural contexts. The child plays an active role in this relationship, interacting with the environment and modifying it with the help of internalised mental tools. (p. 16)

A few aspects of Bodrova's statement are worth noting in relation to young children's role in digital media consumption. In the above statement, Bodrova portrays young children as active agents in transforming the material world. This view is consistent with that which perceives children as agentic in media consumption (Buckingham & Sefton-Green, 2003). In this context of children's agency in media consumption, regardless of the unique structure and ideology digital media passes on to the audience, children actively conduct their own practices with media that are consistent with their experience, interests and emerging abilities. What is internalised then is not the ideology of digital media, but the practices made possible by media interacting with other contextual variables.

Vygotsky (1978) was interested in understanding the process through which lower forms of behaviour, which are biological, are transformed into higher psychological functions that are culture-specific. For him, child development is "a progression of qualitative changes marking the transition from one age to another" (Bodrova, 1997, p. 17). For Vygotsky (1978), understanding the developing child only occurs in the context in which s/he thrives. Children's activities do not occur in a social vacuum but within a socio-historical and cultural setting of meanings and relationships (Jaeger & Rosnow, 1988). In other words, the activities are embedded in a context of time, space, culture, and the norms and values that guide behaviour (Rogoff, 2003). Understood this way, the context/setting is an integral part of understanding joint media engagement between parents and young children in family homes. Human learning

is rooted in interpersonal contexts within which it occurs (Jaeger & Rosnow, 1988; Vygotsky, 1978; 2004, Bronfenbrenner & Morris, 2006) so the social conditions of the contexts where children live influence learning (Hedegaard, 2009, 2018; Hedegaard & Chaiklin, 2005; Hedegaard & Fleer, 2008). The contextual conditions of the family might be the determining features of digital media use in homes by young children. These family conditions vary from one institution (family) to another (Bronfenbrenner 2005; Bronfenbrenner & Morris, 2006), so joint media engagement activities and associated social and communicative aspects may vary from one family to another (see Edwards et al., 2016). Vygotsky put considerable emphasis on tool mediation and its role in transforming human mental functions within social and cultural practices (Vygotsky, 1978). Thinking and learning are mental processes socially and culturally embedded in everyday family life.

3.4.2 Bronfenbrenner's person-environment dialectical relationship.

Socioecological theory provides an innovative and complex lens for understanding human psychological development in that it considers the diverse environmental forces that interact with the individual characteristics to produce psychological processes (Bronfenbrenner, 1990, 1992, 1993; Bronfenbrenner & Morris, 1998). The model developed by Urie Bronfenbrenner and his colleagues (Bronfenbrenner, 1977, 1979, 2005; Bronfenbrenner & Ceci, 1994; Bronfenbrenner & Crouter, 1983; Bronfenbrenner & Morris, 1998, 2006) over an extended period of time underwent at least three phases in its development (see Tudge, Mokrova, Hatfield, & Karnik, 2009; Tudge et al., 2016). The goal in this section is not to trace how the theory developed through the three phases but rather to provide a socio-historical account of the sources of Urie Bronfenbrenner's motivations to continually revise his original theoretical propositions made in the 1970s (Bronfenbrenner, 1977, 1979). I believe that a historical overview of the developmental trajectory of Bronfenbrenner's thinking is important because it reveals ways in which cultural-historical and broader activity theories interrelate with socioecological theories.

Born in the Soviet Union in 1917, Urie Bronfenbrenner immigrated, along with his family, to the United States when he was six years old. He studied psychology at Cornell University, and later completed a master's and a PhD at Harvard University and the University of Michigan respectively. As a researcher, Bronfenbrenner made major theoretical and empirical

contributions in the fields of developmental psychology and family studies. Bronfenbrenner an intellectual giant was one of the best synthesisers in developmental psychology in recent times. He kept on revisiting his socioecological systems theoretical model of human development by criticising earlier formulations, redefining, and replacing some propositions with more general and powerful evolving conceptual and empirical ideas (Bronfenbrenner & Ceci, 1994; Bronfenbrenner & Morris, 1998, 2006). It would be interesting to know why the initial socioecological systems theory morphed into a bioecological model of human development (Tudge et al., 2009; Tudge et al., 2016). Tudge, Mercon-Vargas, Liang, and Payir (2017) postulate the question: "How did he arrive at this theoretical approach?" (p.45). Responding to this question, Tudge et al. (2017) propose that we obtain adequate understanding of the motivations behind the development of Bronfenbrenner's model of human development by reading his biographical details. I believe in suggesting the link to the biographical details, Tudge partly answers the question he and his colleagues posed. Tudge et al. (2017) correctly identified that Bronfenbrenner's (1995) biographical information suggests that ideas about the ecology of human development theory arose from his childhood experiences with his father who frequently drew his attention to the interdependence between the environment and living organisms, and later during his schooling and college years as he interacted with different people from different sociocultural backgrounds.

I wish to suggest two additional ideas to Bronfenbrenner's childhood experiences that made a significant contribution to the evolution of the bioecological model. The first one lies in the form and substance of the theory itself. Just like cultural-historical theory (Rogoff, 2003; Stetsenko, 1999; Vygotsky, 1929, 1978), the socioecological theory bases itself on historical, cultural and social changes in human conditions, the core forces that drive psychological growth. With the tremendous changes in technological innovations, a theory used for investigating developmental processes in relation to television in the 1950s would require revisiting. Now we have highly mobile digital media, combined with the Internet making it increasingly difficult to draw a line between digital media and context, especially with the emergence of wearables (Plowman, 2016). Today digital technologies enmesh in context to the point of becoming invisible. As cultural and social conditions of man's existence change, it makes sense for new theoretical paradigms to emerge. The changes in theoretical paradigms are evident in Bronfenbrenner's recent theoretical propositions (Bronfenbrenner, 1993, 2005).

The second idea not yet embraced by researchers, at least in early childhood education concerns the influence of Soviet Psychology on Bronfenbrenner's scholarly work. Throughout his scientific life, Bronfenbrenner made many references to prominent Soviet developmental psychologists and the general Soviet Union ideology of raising children in a communist society (Bronfenbrenner, 1970). Bronfenbrenner (2005) borrowed concepts from Soviet psychology that correspond to theoretical propositions and research designs he was developing especially the concept of "*transforming experiment*" (p. 47, italics in original text; see also Bronfenbrenner, 1977b, 1979a). The 'transforming experiment' he suggests was a psychological concept reminiscent of Walter Fenno Dearborn, his first research mentor in graduate school who once told him, "Bronfenbrenner, if you want to understand something, try to change it" (Bronfenbrenner, 1979a, p. 37, 40). This concept is particularly useful in an era of mediatised childhood in that the conditions of socialisation are changing (Couldry & Hepp, 2017) and for us to fully comprehend childhood and its contemporary practices in contemporary society, we must pay attention to the changing conditions which certainly comprise changes in the media environment (Hjarvard, 2013, 2018; Krotz, 2009). The origin of the concept 'transforming experiment' is cultural-historical theory advanced by Lev Vygotsky in the 1920s and early 1930s. A transforming experiment in cultural-historical theory denotes an experiment "that radically restructures the environment, producing a new configuration that activates previously unrealised potentials of the subject" (Bronfenbrenner, 1979a, p. 40).

To support the inference that Soviet Psychology influenced his thinking, I note that Bronfenbrenner made at least seven trips to the Soviet Union between 1960 and 1970, the first trip being in 1960 and the second coming shortly after in 1961 (Bronfenbrenner, 2005). How did he end up in the Soviet Union? I profer some historical events leading to his scientific trips to the Soviet Union and how those trips were decisive in his later theoretical thinking about human development in context. Historians concluded that world wars are always about psychological warfare and as such, the two world wars brought together the military and social psychology departments in universities in Germany, USSR, and U.S. (see e.g., Kennedy, Hughes, & McNeil, 2012; Ziegler, 1998). There was fierce competition among countries about who would become the world superpower. Ziegler (1998) writes: "During World War II, many psychologists left academia to work with the military and government, applying their skills to real problems ranging from psychological warfare to boosting morale on the home front" (p.

533). During this period and that of the Cold War that followed, the need for psychologists, especially mental health professionals intensified, and their skills and techniques played essential roles in the Army (Kennedy et al., 2012). One day after he received his Doctorate in 1942, Bronfenbrenner was inducted into the U.S. Army as a private placing him in the Office of Strategic Services assessment unit "for evaluating candidates for secret service duty overseas" (Bronfenbrenner, 2005, p. 42). Following demobilisation, many developmental psychologists returned to the academic world. However, not all of them disappeared from the noble duty of applying practical knowledge and skills in solving social problems. Among those was Bronfenbrenner. In Ziegler's (1998) words:

> After the war, not all developmentalists retreated to the familiar comfort of their labs. Many noted scholars continued to study social problems and to seek useful applications for their work. Some of my own mentors did so despite occasional chagrin of their colleagues. These included *Urie Bronfenbrenner,* Bob Cooke, Eleanor Maccoby, Julius Richmond, Milton Senn, George Tarjan, and others…" (p. 533, italics added for emphasis)

It seems that Bronfenbrenner's interest in the study of social problems faced by families and identifying ways of countering them paved the way for him to make several journeys to the Soviet Union so that he could become acquainted with new developments his area of research. In the first trip, he was among the many "scientists asked by the American Psychological Association to assess Soviet work in this field" (Bronfenbrenner, 2005, p. 216). Bronfenbrenner (1961) points out that:

> I was in the Soviet Union during the summer of 1960…The primary purpose of my trip was to become acquainted with scientific developments in my field, which is social psychology. But in addition to visiting laboratories at universities and institutes, I also wanted to become acquainted with *living* social psychology – the Soviet people themselves. It was my good fortune to be able to speak Russian. (p. 45)

Several other trips followed. In the following passage, Bronfenbrenner (2005) provides a summary of the reasons for the trips:

> The second journey was made in 1961 as a member of an official United States exchange mission in the field of public health. These visits provided an opportunity to arrange for a scientific exchange between Cornell University and the Institute of Psychology in Moscow. This exchange has made possible a series of five visits, ranging in length from a few weeks to several months, in the course of which the more systematic aspects of the research were carried out. (p. 216)

The scientific exchange program between Cornell University and the Institute of Psychology in Moscow made possible interactions between Bronfenbrenner and scientists who revolutionised developmental psychology in the twentieth century. As a research scientist at the Institute of Psychology in Moscow, Bronfenbrenner worked closely with Leontiev and in the process became aware of the new developments in Soviet Psychology (Bronfenbrenner, 1977). Alexej N. Leontiev was one of the students and collaborators of Lev Vygotsky in developmental psychology at the Institute of Psychology in Moscow. Another significant figure at the institute was Alexander R. Luria, who wrote a seminal paper about the problem of the cultural behaviour of the child (Luria, 1928). After Vygotsky's untimely death in 1934, both Luria and Leontiev continued to advance on Vygotsky's work, albeit along different lines (Luria, 1976).

Did Bronfenbrenner learn anything new by having second-hand contact with Vygotsky through Leontiev? If the answer to this question is in the affirmative, what was it that he learned that was different in American psychology? I believe that Bronfenbrenner took home the idea of the cultural and social origin of higher cognitive processes that are unique to human beings. To respond to the second question, I turn to the general principles of cultural-historical worldview Vygotsky and his colleagues (mainly Luria and Leontiev) and later James Wertsch, Michael Cole, Barbara Rogoff, Marilyn Fleer, Marianne Hedegaard, Anna Stetsenko, Igor Arievitch and other contemporary researchers advanced in relation to culture, learning and development. While exploring these theoretical ideas, I do not dwell on them in depth as they are providing a historical backdrop for the development of Bronfenbrenner's socioecological model of human development. I demonstrate that the ideas expounded on in the socioecological theoretical formulations about human development are not far from those inherent in cultural-historical tradition, but before that, I want to call attention to the discussion between Bronfenbrenner and Leontiev about the philosophical differences in Soviet and American psychology.

The distinctive feature of American psychology prior to 1960s was its focus on the characteristics of developing individuals in their mature or fossilised form (Cole, 1996). Although these studies yielded important findings during that time, they had one shortcoming. By analysing cognitive processes in their finished form, it was not possible to explain the process through which they were formed because "they seemingly lose all traits of their genesis" (Vygotsky, 1997b, p. 71). It was enormously difficult to conduct proper psychological analysis without knowing the basic traits or events of the genesis of higher cognitive processes passed through in a long history of development and converted into some form of fossil (Vygotsky, 1997b). These studies, although forming the foundation on which today's developmental psychology is built, were unable to account for the properties of the social context in which the developing person lives (Bronfenbrenner, 1979a). Bronfenbrenner (1977) writes about his encounter with Leontiev:

> This foreshortened theoretical perspective was first brought to my attention by Professor A. N. Leontiev of the University of Moscow. At the time, more than a decade ago, I was an exchange scientist at the Institute of Psychology there. We had been discussing differences in the assumptions underlying research on human development in the Soviet Union and in the United States. In summing up his views, Professor Leontiev offered the following judgment: "It seems to me that American researchers are constantly seeking to explain how the child came to be what he is; we in the U.S.S.R. are striving to discover not how the child came to be what he is, but how he can become what he not yet is." (p. 528)

From the quote, we can deduce that whereas American psychologists were interested in examining developmental *outcomes* in their finished state, Soviet psychologists' interest lie in understanding the *process* forming psychological functions. Bronfenbrenner elaborates that the psychology of focusing on how "the child can become what he is not yet" requires a comprehensive contextualised understanding of the interplay between the developing person and the ecological niche. This discovery fundamental in Bronfenbrenner's thinking about developmental psychology would later be reflected in his theory of the ecolo\gy of human development (1979). He incorporated environmental influences that potentially determine the trajectory of individual functioning by rigorously interacting with the innate biological blueprint

of a developing human being. Edwards et al. (2017) were the first to draw the relationship between Bronfenbrenner and the Russian way of interpreting socioecological theorisation employing this thinking for understanding digital technologies in-situ. Regarding his scientific activities in U.S.S.R., Israel, and in the People's Republic of China, Bronfenbrenner (1979a) narrates how the experience remediated his thinking. He states:

> Experience in these societies had two profound effects on me that are reflected in the present volume. First, it radically expanded my awareness of the resilience, versatility, and promise of the species Homo sapiens as evidenced by its capacity to adapt to, tolerate, and especially create the ecologies in which it lives and grows. Seen in different contexts, human nature, which I had previously thought of as a singular noun, became plural and pluralistic; for the different environments were producing discernible differences, not only across but also within societies, in talent, temperament, human relations, and particularly in the ways in which the culture, or subculture, brought up its next generation. The process and product of making human beings human clearly varied by place and time. (p. xiii)

It is clear in the quotation that Bronfenbrenner's experiences in the Soviet Union and other countries profoundly influenced him as reflected in his later writings on human development and public policy that improved the conditions of families so that young children would thrive. Bronfenbrenner's work appears to be a magnification and differentiation of Vygotsky's ideas. For example, Vygotsky (1994) believed that the environment within which individuals function largely determines who they become. Based on the same understanding, Bronfenbrenner's (1979) socioecological systems theory differentiated and expanded into a model containing proximal as well as distal impingements of human development.

Socioecological systems theory differentiates into five nested environments with one inside another. The environments include,

- the microsystem, which is the most proximate environment/setting where individuals live and carry out their daily activities' in partnership with those who are competent in a culture interacting with objects and symbolic features of the environment

- the mesosystem that comprises interrelations of two or more immediate settings (microsystems) containing the individuals
- the exosystem, which is "an extension of the mesosystem embracing other social structures, both formal and informal, that do not themselves impinge upon or encompass the immediate settings in which that person is found", and
- the macrosystem, which reflects the culture "that set[s] the pattern for the structures and activities occurring at the concrete level"; and the chronosystem that comprises the structural changes that take place across the systems over time (Bronfenbrenner, 1977, p. 514-515)

I recognise the roles played by the meso, exo-, macro- and chrono-systems in human development. However, because my study took place in the home, my focus would be on the processes and events that take place in the microsystem. Bronfenbrenner (1977) defines the microsystem as:

> The complex of relationships between the developing person and environment in an immediate setting containing that person (e.g., home, school, workplace, etc.). A setting is defined as a place with particular physical features in which the participants engage in particular activities in particular roles (e.g., daughter, parent, teacher, employee, etc.) for particular periods of time. The factors of place, time, physical features, activity, participant, and role constitute the elements of a setting. (p. 514)

Two aspects of this definition are worth highlighting. The first one has to do with the dialectical relationship between the developing person and the environment, which necessarily contains cultural artefacts including digital media. The second aspect refers to the ecological factors that invite or inhibit action by the developing person. In the next section, I explain the ecological factors of place, time, physical features, participants, and role within the key concepts underlying the socio-contextual approaches to research.

To sum up this section, Bronfenbrenner's seven trips in the Soviet Union served an equally important purpose as his childhood experiences. Arguably, his encounter with Leontiev at the Institute of Psychology in Moscow broadened his outlook about human development and laid the ground for one of the most significant criticisms about studies that focused on

development ‘out of context’ and later those on ‘context without development’ (Bronfenbrenner & Morris, 2006, p. 795). Even though Bronfenbrenner’s concern with contexts differed from Vygotsky’s concern with higher psychological functions, the two theories complement and strengthen one another. Both theories share a common understanding of viewing human development as a function of the interaction of diverse sociocultural forces. In the following pages, I outline the key features that are common grounds for socio-contextual approaches to human learning, showing how they relate to cultural-historical and socioecological theories.

3.5 Key ideas in Socio-Contextual Approaches to Research

Many ideas characterise theories about learning and development in context. For the purposes of this thesis, I selected three main ideas that I suggest are suitable for understanding joint media engagement in children’s sociocultural milieu, namely: the social origin of psychological processes, the primacy of sociocultural activities and tasks, and the role of mediational means.

3.5.1 The social origin of psychological processes.

The social and cultural environment in which developing human beings live is of primary importance to the understanding of psychological functions such as memory, motivation, self-regulation, remembering, thinking, and speech (Bronfenbrenner, 2005; Bronfenbrenner & Ceci, 1994; Bronfenbrenner & Morris, 2006; Vygotsky, 1978). Vygotsky was among the first researchers to bring forth such an understanding drawing on dialectical materialism (Vygotsky, 1978). He offered the genetic law of development, suggesting that when a child is born, it does not possess higher mental functions (Fernyhough, 1997; Vygotsky, 1929, 1978, 1997a). Functioning in a given culture requires competencies culturally acceptable to members who constitute that specific culture (Rogoff, 1990, 1993, 1995; Rogoff et al., 1993). Thus, the effective functioning of human beings requires them to develop culture-specific mental functions. Acquiring culture-specific ways of being and behaving through socialisation is a process occurring primarily through interaction with other humans, objects and symbols provided by culture (Bronfenbrenner, 2005; Bronfenbrenner & Ceci, 1994; Vygotsky, 1978). A socio-contextual approach to learning “espouses the view that social interaction among two or more people is the greatest motivating force in human development” (Eun, 2010, p. 403). According to the genetic law of cultural development:

> Any function in the child's cultural [i.e. higher] development appears twice, or on two planes. The first appears on the social plane, and then on the psychological plane. First, it appears between people as an inter-psychological category, and then within the child as an intra-psychological category. (Vygotsky, 1981, p. 163)

Vygotsky conceives the process of psychological development arising from the dialectical interaction between the developing child and its social environment that contains several of Bronfenbrenner's (1977) ecological features or what he called the *elements of the setting*. I previously mentioned these ecological features of the activity setting when I defined the microsystem and its function in human development. The first ecological feature evident in Vygotsky's (1981) genetic law of cultural development is that of *participants,* which refers to individuals or people involved in the interaction with the developing child. Attention is given to individuals in the interaction because they bring with them characteristics which determine aspects such as selective attention, motivation to learn, active participation, and accumulated cultural experience (Bronfenbrenner, 2005; Bronfenbrenner & Ceci, 1994). For example, motivated individuals will learn better than those who are not. *Role* is the second ecological factor evident in the generic law of development. Individuals in an interaction act based on roles in terms of the societal expectations of the interacting individuals (Bronfenbrenner, 1977, 1979, 1990; Shelton, 2019). Competent members of a culture who have accumulated enough experience assume the role of guiding those who are not yet competent through *guided participation* (Rogoff, 1990, 1993, 1995, 2003; Rogoff, Moore, Correa-Chavez, & Dexter, 2015; Rogoff et al., 1993). Young children with less cultural experience assume the role of learners although they also influence the learning process in fundamental ways (Bronfenbrenner, 2005; Hedegaard, 2012). From this complex interaction, the learner negotiates meaning and easily comprehends complex information that could have been incomprehensible (Hutchby, 2001). For learning to take place, individuals in an interaction need to participate actively. We see that the agency of the developing child is central to this process of mental growth and refinement. As Bronfenbrenner (2005) suggested, the developing person is a partial producer of his/her development mainly because from early on in life, human beings are capable of changing the conditions of their existence. Hedegaard (2012) emphasises Bronfenbrenner's point by arguing that "Through their actions children influence the settings in which they participate (i.e., in the family and at school), thereby contributing to the conditions for their own

development." (p. 129). Children change the conditions of their existence by exerting an influence on everyday institutional practices even in the first few hours after birth (Hedegaard, 2012). For example, the cry of a one-day-old infant alerts the mother on the nature of its needs and responsive mothers often know if the cry is associated with pain or hunger.

We may well question, what is it that moves from the interpersonal to the intrapersonal plane? How is the process conceived? Bronfenbrenner succinctly elucidates on this process. For Bronfenbrenner (2005), the classical psychological processes, that is, thinking, self-regulation, memory, attention, and the like, "involve psychological content: They are about *something"* (p. 177). Bronfenbrenner (2005) maintained that even though learning theorists acknowledge that psychological growth takes place in the brain that is just half the story because the process does not begin in one's head or mind. He contends that when a child is born, it does not have the psychological content of thinking, speaking, self-regulation, and remembering. What the newborn child has is the biological or genetic potentials for acquiring that content. This genetic propensity is what Vygotsky (1978) referred to as lower mental functions. The psychological content responsible for transforming lower mental functions (those of a newborn) to higher functions (those of an encultured adult) (Vygotsky, 1978) originates in the environment outside an individual's mind or brain (Bronfenbrenner, 2005; Bronfenbrenner & Ceci, 1994). Learning content in the first place forms in society and outside the individual. Bronfenbrenner (2005) states that:

> More specifically, in humans, the content turns out, early on, to be mainly about people, objects and symbols. These entities exist initially only in the environment: that is, outside the organism. Hence from its beginning, development involves interaction between organism and environment. Moreover, interaction implies a two-way-activity. The external becomes internal and becomes transformed in the process. But because, from its beginnings, the organism begins to change its environment, the internal becomes the external and becomes transformed in the process. (p. 177)

In my view, Bronfenbrenner (2005) is referring to the processes of *internalisation* and *externalisation* that Vygotsky (1978) proposed as the main mechanisms through which lower psychological functions become converted into culture specific ways of reasoning (higher psychological functions). Vygotsky (1978) did not articulate how these processes of

internalisation and externalisation occur. The contemporaries of Vygotsky particularly those focused on the study of the mind in society have tried to conceive Vygotsky's processes more effectively (see e.g., Bruner, 1985, 1996; Bruner, 1978; Penuel & Wertsch, 1995; Rogoff, 1990, 1993, 2003; Rogoff et al., 1993; Wertsch, 1991, 1994).

The movement of psychological content from the interpersonal to intrapersonal plane happens in a region known as the zone of proximal development (Vygotsky, 1978). Vygotsky (1978) introduced the concept of the zone of proximal development as a measure of the young child's learning potential. He defined the zone of proximal development as the distance between what the child can do on his own (actual development) and what the child can do with the help of an experienced person (actual development) (Garton, 1992; Rogoff, 2003; Vygotsky, 1978). Garton (1992) drawing on Vygotsky's cultural-historical theorisation of human mind explains that psychological growth and refinement takes place in the zone of proximal development through collaborative effort where all participants in sociocultural tasks make contributions toward achieving the goals of interaction. The zone of proximal development forms only through social interaction (Bruner, 1966, 1978, 1996; Vygotsky, 1978). This notion implies that the social situation of development and the support or assistance provided therein are critical for the formation of the zone of proximal development and hence cognitive growth (Garton, 1992). Sorokin (1947) contends that without social interaction among people, the idea of language and mental development would be out of the question, and as a result, there would be no accumulation of human culture, an important element in human sociocultural organisation. The zone of proximal development arises in social interaction to allow for the intersubjectivity and definition of sociocultural tasks to be handled (Garton, 1992). Intersubjectivity is a state of conscious awareness where participants in sociocultural tasks become aware of their own intent as well as the intentionality of others (Vygotsky, 1978). The state of intersubjectivity once achieved permits individuals to share goals and redefine tasks which then allows for the dynamic movement and transformation of psychological materials on both interpersonal and intrapersonal planes.

The dynamic movement and transformation of the external to internal processes involves the process of *appropriation* (Rogoff, 1993, 1995, 2003; Rogoff et al., 1993). Appropriation of psychological content, from the social to the individual plane, requires developing person(s) to

actively participate in sociocultural activities and tasks, in conjunction with others already competent in such activities, as well as to use the objects and symbols provided by that culture (Bronfenbrenner, 2005; Bronfenbrenner & Ceci, 1994; Rogoff, 1993; Scollon, 1998; Tudge, 2008; Tudge et al., 2000; Tudge & Hogan, 2005; Vygotsky, 1929, 1978, 1994; Wertsch, 1991, 1994). Thus, appropriation of psychological content from the outside to the internal world of human beings occurs through guided participation (Rogoff, 1990, 1993, 2003)

The process of appropriation, according to Bronfenbrenner (2005), is neither simple nor quick. It does not happen in a flash (Vygotsky, 1978). It is rather a slow process, taking place over time, through regular participation, in progressively more complex developmental tasks (Bronfenbrenner, 1979, 1992, 1993, 2005; Bronfenbrenner & Ceci, 1994; Bronfenbrenner & Morris, 1998, 2006; Vygotsky, 1978). During engagement in socially and culturally organised activities that cause development (mastery or movement in the zone of proximal development), the child interacts with "one or more others, usually older, occasionally of the same age, and rarely younger" (Bronfenbrenner, 2005, p. 97). Vygotsky (1978) considers the other people who interact with the developing person as more experienced and competent in some selected sociocultural activities. The encultured members of the community (Cole, 1996) capitalise on their competence and motivation to socialise young children into the community's ways of behaving and acting. They arrange the environment that makes psychological development possible by structuring activities and tasks, providing resources to mediate the activities, scaffolding knowledge and skills in ways enabling them to carry out their own intentions (Bronfenbrenner & Evans, 2000; Cole, 1995; Cole & Bruner, 1971; Cole & Griffin, 1980; Litowitz, 1997).

Accomplishing the various social and communicative actions of joint media engagement may require specific social behaviours. Cole and Engeström (1993) argue that, "Cultural mediation implies special importance of the social world in human development since only other human beings can create the special conditions needed for that development to occur." (p.145). Social and communicative actions represent different levels of difficulty, and the youngest children might not be able to perform most of them. Linked to Vygotsky (1997a) thinking, particularly on concept formation, the social and communicative features of joint media engagement reflect development that involves "a progression of qualitative changes

making the transition from one age to another" (Bodrova, 1997, p. 16). Relating this conceptualisation to my research questions implies that, if we have a better understanding of how joint media engagement works, then, we can mobilise digital media for educational purposes in homes.

3.5.2 The primacy of sociocultural activities, tasks and practices.

Developmental psychologists have a special interest in activity settings because it is within the activity setting that children's development "unfolds from experience in socially structured activities through the internalisation of processes and practices provided by society and its members" (Vygotsky, 1978, p. 100). Hedegaard (2012) and Fleer and Hedegaard (2010) conceived child development as participation in everyday institutional activities and practices. Thus, child development, in those terms, depends upon how the child participates in sociocultural activities and practices (Fleer & Hedegaard, 2010). Hedegaard (2009) argues that a child must initiate or joint into sociocultural activities for development to occur. *Activity* is one of the contextual factors or features of the settings in which human beings live. It is essential to examine the type and nature of activities young children engage in to understand their psychological and social functioning. Socio-contextual researchers do not enter into children's minds to understand the psychological processes. Instead, they examine the children's activities with the assumption that children externalise thought processes through those everyday activities. We can grasp children's thought processes by examining the activities they do.

The content of psychological functioning manifests in the sociocultural activities and tasks that characterise the everyday living of people in the community (Rogoff, 1993, 1995; Rogoff et al., 1993). These practical sociocultural activities and tasks that require hands-on experiences (Bronfenbrenner, 2005) are the ones that feed psychological functioning with psychological content (Vygotsky, 1978). Such sociocultural tasks provide contexts for children to develop in any culture (Vandell, Larson, Mahoney, & Watts, 2015). Although there are cultural pathways, guiding the nature and organisation of activities, depending on age and gender, among other contextual factors such as class, (Tudge, 2008; Tudge et al., 2011; Tudge et al., 2000; Tudge & Hogan, 2005) other researchers established cross-cultural regularities in sociocultural activities and tasks organised for young children (Gaskins, 1999, 2013; Gauvain,

1995, 1998, 2001, 2013; Gauvain, Munroe, & Beebe, 2013; Rogoff, 1993, 1995, 2003; Rogoff et al., 1993). It is within shared sociocultural activities that young children:

> [l]earn what is expected of them, which activities are considered appropriate or inappropriate, how they are expected to engage in these activities, the ways other people will deal with them, and the ways in which they are expected to deal with others Individuals initiate activities themselves and try to draw others into those activities, and it is within these activities that they try out different roles and observe the roles of others, both with regard to themselves and others. (Tudge, 2008, p. 73-74)

It is also important to recognise that individuals, including young children, have varying motives and interests that determine the choice of activities and the demands they place on others in the activity setting (Hedegaard, 2012). The idea of motives is acknowledged in activity theory where it is argued that individuals engage in goal-oriented activities (Engeström, 1999; Leontiev, 1978). Motives for young children in activity settings relates to what they find meaningful and important to them and this influences how other people in the activity settings relate with them (Hedegaard, 2012). Hedegaard (2009) has noted that institutionalised practices of communication and shared activities responsible for child development may initiate or inhibit the kind of activities that young children engage with thereby becoming conditions of development.

In terms of digital media use in families, ‘practices’ refers to regular and recurring activities, and tasks (Jones, Chik, & Hafner, 2015). Marsh et al. (2015) have been at the forefront in researching ways of initiating young children in digital literacy practices in homes. As already mentioned, historical, social, cultural and institutional settings, each with its own beliefs about what it values and promotes embeds young digital media activities and associated practices. For example, there may be a high likelihood that families in communities that value education will organise young children’s digital media activities, reflecting and supporting school literacy and numeracy skills. Such families want their children to succeed in schools and educational reformers constantly remind them that young children need to come to school when they are ready to learn (Giaquinta et al., 1993). Such values upheld by the community push families to use digital media as learning resources.

3.5.3 The idea of cultural mediation.

I have stated that organised sociocultural activities and increasingly complex tasks carry psychological content (Bronfenbrenner, 2005; Bronfenbrenner & Ceci, 1994). The mastery of psychological content happens through interaction (Bronfenbrenner, 2005; Bruner, 1983, 1996; Bruner, 1981; Vygotsky, 1978, 1997a; Wood, Bruner, & Ross, 1976). However, young children's mastery of psychological content in its abstract forms requires mediation with some concrete materials (Luria, 1976; Vygotsky, 1978; Wertsch, 1991, 1994). The movement of learning from the social plane to the individual plane is only possible when using mediational tools (Bronfenbrenner, 2005; Scollon, 1998; Vygotsky, 1978; Wertsch, 1991, 1994). Human beings do not just engage in activities for their own sake. For the most part, they have an object they want to achieve through their engagement in activity (Leontiev, 1978). Humans achieve these goal-directed objects through the use of tools (Engeström, 1999; Leontiev, 1978).

Vygotsky (1978) concluded that learning could be almost impossible without the use of cultural tools. The reason behind this is that human beings do not directly act on the environment they do so indirectly via cultural tools that evolved through the history of humankind (Fernyhough, 1997; Hedegaard, 2009; Vygotsky, 1994). The underlying assumption with most socio-contextual perspectives on learning is that all human activities and actions require mediation (Bronfenbrenner, 2005; Bruner, 1985; Penuel & Wertsch, 1995; Rogoff, 1995; Scollon, 1998; Scollon & Scollon, 2004; Wertsch, 1991, 1994). Cultural tools or mediational means mediate human activity such as narratives, play, storytelling among other sociocultural activities (Bruner, 1985; Fernyhough, 1997; Hedegaard, 2009; van der Veer, 2012; Vygotsky, 1929, 1997a; Wertsch, 1991)

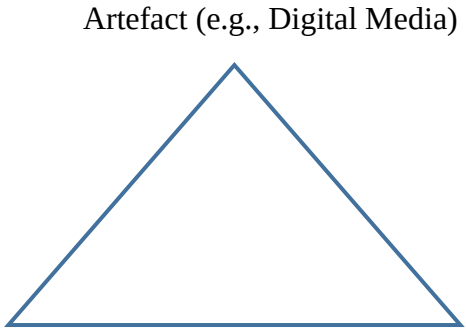

Figure 1 Vygotsky's basic mediation triangle (Adapted from Cultural psychology: A once and future discipline. M. Cole, 1996, p. 119)

Vygotsky (1978) contended that introducing mediational means into the activity radically changes the structure of that activity. Mediational means having the ability to alter the direction of the activity. Luria (1976) suggests that "the tools used by man not only radically change his conditions of existence, they even react on him in that they effect change in him and in his psychic condition" (p. 493).

Learning activities occur in cultural settings and are mediated by cultural tools such as language and other symbols, and these can effectively be understood by studying how they have historically developed. Wertsch (1994) elaborates on mediation by arguing that tool mediation is central in Vygotsky's understanding of mental functioning because tools arise from historical, cultural and institutional conditions and have meaning to members of a culture. These contexts, he believes, provide cultural tools that, individuals master given time. Because mediational means emerge from a culture over time, they enmesh with sociocultural history that enables and constrains some activities and actions. As such, the mediational means are affordances that once perceived, only support some human activities, not all (Gibson & Pick, 2000). Gibson (1979) saw the opportunities and constraints in the surrounding environment as affordances for human activity. Bruner (1966) and Cole and Griffin (1980) introduced the concept of 'cultural amplifier' which is similar to mediational means arguing that cultural amplifiers such as the writing system have the capacity to extend psychological functioning. Mediational means form the key elements of social action (Scollon & Scollon, 2003, 2004). As individuals act with others in social situations, they explore and mobilise the environmental conditions towards accomplishing some form of action or activity. Without the semiotic systems (mediational means), human action is not possible (Scollon & Scollon, 2003).

In thinking about digital media in early childhood from a mediation point of view, I frame my language in a way that permits me to see digital media as a mediational means that children and adults recruit to support everyday family routines and activities. Jenkins (2006) observes that,

> Rather than dealing with each technology in isolation, we would do better to take an ecological approach, thinking about the interrelationship among different communication technologies, the cultural communities that grow up around them, and *the activities they support.* (p. 7 italics my own)

I look at the way digital media, understood as a cultural tool, mediates action, and how this, reflects sociocultural practices. Wertsch (1991) contended that "Human action typically employs "mediational means" such as tools and language, and that these means shape action in essential ways" (p. 12). Scollon (1998), drawing on this conceptualisation, proposed that '[M]ediated action is a site in which social and discursive practices are instantiated as actions of humans; at the same time, it is a site in which individual humans act upon society and its discursive practices' (p. 10). Scollon (1998) supports the idea that traditional semiotic systems such as texts or conversations are viewed as cultural tools with which we mediate human action, in as much as they become "the means by which sociocultural practice is interpolated into human action" (Scollon, 1998, p. 15). Following this line of thinking in terms of technological tools, Scott, Cole, and Engel (1992) view computers as mediational means for supporting human activity:

> [t]he historically conditioned forms of activity mediated through computers must be studied for the qualitatively distinctive forms of interaction that these artifacts afford and the social arrangements that they help constitute. Moreover, one is encouraged to seek explanation of current uses of computers, in terms of the history of the technology, and, the social practices that the technology mediates; one needs to consider the "effects" of interacting in this medium, not only as they are refracted through transfer tests, or in local activity systems (such as classroom lessons), but also in the entire system of social relations of which they are a part. (p. 192)

Some things are worth noting in the above quotation. First, computers and digital media in the context of this thesis mediate conventional activities and practices in families. We need to understand how this process of mediation occurs and what forms of practice arise from the process. Second, there is a need to consider how technology evolved throughout the history of man and what influence the new ideas from that evolution process have had on human society.

3.6 Concluding Remarks

My aim in this chapter was to provide a socio-contextual approach as one of the possible analytic tools for understanding joint media engagement as a cultural form that arises out of the material conditions of contemporary society. I have blended cultural-historical, socioecological theory and related theories considering context as an important ingredient for understanding sociocultural phenomena. I have shown that theoretical approaches that take their inspiration from cultural materialist and ecology of human existence acknowledge the materiality of digital media and the ways they mediate human activity and practice. The use of socio-contextual theoretical perspectives, especially the application of the sociocultural concept of 'mediation' establishes the ways in which parents and young children use digital media as 'cultural tools' or 'mediational means' (Erstad & Wertsch, 2008; Scollon, 1998; Wertsch, 1991, 1994) to accomplish historical conventional practices related to child rearing and socialisation (Couldry & Hepp, 2017). These theoretical perspectives allow for the analysis of digital media in children's life beyond the perceived effects and begin to examine the host of other social uses digital media serves (Goodman, 1983). The next chapter discusses the methodology used to generate empirical material for this thesis, grounded in the theoretical perspectives outlined in the present chapter.

CHAPTER FOUR: METHODOLOGY AND METHODS

4.1 Introduction

The preceding chapter elaborated on the socio-contextual theoretical perspectives appropriate for studying joint media engagement in the home setting. The arguments in that chapter revolved around the social origin of conceptual understanding, mediated activities and digital media as cultural tools in the accomplishment of valued sociocultural activities and practices. In this chapter, I discuss relevant methodology and methods used to generate empirical data relating to joint media engagement in the selected family homes in Nairobi County, Kenya. I have structured the chapter into nine sections. The first section provides an overview of an appropriate methodology for studying joint media engagement by revisiting some of the philosophical assumptions laid down in the previous chapter and suggesting that a qualitative case-based study was appropriate. Sections two and three discuss the general characteristics of qualitative research and the rationale for using a case study methodological strategy to study joint media engagement in homes. In sections four to seven, I examine the research setting by describing the research site, the sampling strategy, the sample size and some demographics of the families participating in the study. The eighth section presents an overview of the data generation and analysis procedures, and section nine discusses ethical issues in researching with young children.

4.2 Studying Joint Media Engagement in Everyday Settings: Quantitative or Qualitative Approach?

At the beginning of the preceding chapter, I examined the philosophical presumptions researchers hold prior to beginning both quantitative and qualitative research. I outlined that my philosophical grounding is within the broader *contextualist* (Pepper, 1942) and *social constructionist* (Denzin & Lincoln, 2018; Guba & Lincoln, 1994; Lincoln & Guba, 2013) schools of thought. I used *contextual constructionism* as a shorthand for contextualist and social constructionist worldviews commonly used in structuring social science research. I followed by discussing theoretical perspectives founded on the philosophical principles that underlie the contextual constructionist worldview. The guiding question for this chapter is,

What methodological approach and methods are suitable for generating data about interpersonal interactions such as joint media engagement between parents and young children in the homes?

The most appropriate methodology and methods are those that align with the principles of contextual constructionism. As Ratner (1997) suggested, "A methodology is only as good as the epistemological and ontological principles on which it rests" (p. 53). The procedures for conducting any research will work well "if they are guided by appropriate epistemological and ontological principles" (Ratner, 1997, p. 53). A research methodology guided by contextual constructionist epistemology and ontology is that which:

(i) brings the researcher closer to the studied world in direct contact with research participants in their real-life conditions;
(ii) considers the researcher as a key instrument in the process of data generation and analysis; and,
(iii) allows construction, re-construction and discursive negotiation of meanings among the participants themselves and between participants and the researcher.

All these three conditions happen in the real-life settings where research participants experience everyday activities and interactions (Merriam, 1998; Stake, 2010; van Manen, 1990), and indicate to us 'how things work'(Stake, 2010). The preceding claims of contextual constructionism point us to a qualitative methodology though qualitative approaches are not the only ones used to study interactions.

Depending upon the researcher's interests, he/she might approach the study of human interpersonal interactions, including joint media engagement between parents and young children in situ from both quantitative and qualitative perspectives, alone or in tandem. In a classical approach to justifying their methodology and method, many researchers choose arguing against the methodological strategy they are not using. I concur with Creswell (2014), who suggests that foregrounding arguments for or against either of the approaches may not help social life research. Silverman and Marvasti (2008) noted the sloppiness of taking such a path. They contend that quantitative/qualitative "dichotomies or polarities in social sciences are highly dangerous … they are excuses for not thinking, which assemble groups of researchers

into “armed camps,” unwilling to learn from one another” (p. 12). Silverman and Marvasti (2008) further suggest that simple forms of statistical measures may be essential characteristics of plausible qualitative inquiries.

With a research approach chosen based on the researcher’s interest and the nature of the research questions, a researcher whose interest is in establishing social trends of how young children use digital media in homes would find quantitative approaches appealing for such a subject matter. It is possible to aggregate many aspects of parent-child interactions and present them in numerical form. Researchers who follow this quantitative logic may, for example, tabulate interactional aspects such as duration of eye gaze, number of gestures used by (inter)acting social actors, number of utterances, and conversational turns. This method of analysis and interpretation of empirical evidence permits quantitative analysts to make inferences (statistical generalisation) to larger populations (Silverman & Marvasti, 2008; Yin, 2016, 2018). On the other hand, the research community acknowledges that some interactional parameters are not suited to quantification logic (Silverman, 2013a, 2017). Researchers interested in the details of interpersonal interaction practices (Lull, 1990) in the context of joint digital media use in families (Stevens & Penuel, 2010; Takeuchi & Stevens, 2011), prefer qualitative strategies that allow them to provide ‘thick descriptions’ (Geertz, 1973). Doing so enables qualitative analysts to retain the contextual richness of the studied phenomena, with such contextual details possibly lost when quantifying sociological and psychological phenomena (Saldaña, 2015; Saldaña & Omasta, 2018).

Researchers researching digital media experiences of young children through ethnomethodology and conversation analytic lenses utilise qualitative methods allowing close micro-examination of digital media practices (Aarsand, 2016; Danby et al., 2013; Daniels, 2017; Merchant, 2012; Merchant, 2015; Storm-Mathisen, 2016; Zack & Barr, 2016) and multimodal actions (Norris, 2004) that constitute everyday experiences of young children (Phoenix & Brannen, 2014). The micro-details of interpersonal interaction and communication, such as the quality of parent-child interactional processes and the way individual characteristics, objects and environmental conditions interact to produce developmental outcomes (Bronfenbrenner, 2005; Bronfenbrenner & Ceci, 1994; Bronfenbrenner & Morris, 2006), documented descriptively by use of words and not statistical measures (Heath, 1997; Silverman, 2006, 2014b, 2017), retain

their contextual richness. The reason I suggest that digital media practices of young children including those related to joint media engagement, may be studied using qualitative and quantitative methods or a combination of the two approaches (mixed methods) is to convey the idea, that neither qualitative nor quantitative research orientation, is inherently superior. Qualitative and qualitative inquiry approaches "simply fulfil different research purposes" (Silverman & Marvasti, 2008, p. 12).

Researchers, particularly those in the fields of anthropology and psychology studying young children's activities in a variety of settings across the world, from socio-contextual theoretical orientations such as Plowman (2015), Rogoff et al. (1993), Super and Harkness (1993), Tudge (2008), Tudge et al. (2006), Weisner (2002), and Whiting and Whiting (1975) employ ethnographic methods of observation and interview, methods originally developed and used in anthropology and sociology. My primary purpose is describing and theorising joint media engagement by way of examining the micro-interactional social and communicative features instantiated when young children use digital media jointly with their parents in their homes. The goal of this chapter is to present a socio-contextual constructionist methodology that bears on young children's digital media activities in everyday life, "through the use of ethnographic methodologies" (Scollon, 1998, p. 267). This methodology approaches and studies joint media engagement as a social practice whose analysis mirrors that of analysing conversations used by interaction (Norris, 2004; Sawyer, 2013) and conversation analysts (Danby et al., 2013; Heath, 1997; Silverman, 2006, 2017). I argue that joint media engagement is suited to analysis as social interaction between parents and young children using digital media to accomplish social and communicative actions. The socio-contextual constructionist methodology I am presenting attends to both verbal and nonverbal actions of social actors as they act and interact with material objects in a social environment (Norris, 2004). In this qualitative case-based approach, I used video observations and interactional analysis (Derry et al., 2010; Norris, 2004) enabling me to access rich insights into the multimodal social and communicative features (Daniels, 2017; Davidson, 2009; Marsh et al., 2015; Merchant, 2012; Merchant, 2015) in their real-life conditions (Stake, 2010; Yin, 2016, 2018). "When it comes to documenting the contextual processes of interpreting, adapting, and integrating media into social life" (Jensen, 2002a, p. 163), a case-based qualitative strategy is useful. A qualitative case-based approach allowed me to pay attention to the conditions of the real-life settings

(Bronfenbrenner, 1977, 2005; Bronfenbrenner & Morris, 2006; Marsh, 2018; Marsh et al., 2015; Marsh et al., 2018; Patton, 2015; Stake, 1998, 2010; Yin, 2016, 2018) in which parents and young children use digital media (Plowman, 2015, 2016; Takeuchi & Stevens, 2011).

4.3 Methodological Features of Qualitative Research

Qualitative research is a broad term encompassing diverse genres of approaches to methods (Saldaña, 2011; Yin, 2016, 2018) of studying 'how things work' in everyday settings (Stake, 2010). As a result of this diversity, researchers have found it challenging to have a well-knitted definition of qualitative research (Yin, 2016). In particular, Denzin and Lincoln (2018) suggested three main reasons that make it problematic for qualitative or interpretative researchers to define qualitative research clearly. First, qualitative research is, neither discipline specific, nor are qualitative research methodologies oriented to specific disciplines. Disciplines and fields ranging from political studies to education, psychology, cultural studies, sociology, anthropology, and media studies, among others, use qualitative research (Stephen & Edwards, 2018; Yin, 2016, 2018). Furthermore, different 'communities of practice' (Lave & Wenger, 1991) adopt their own ways of thinking about their social worlds and constructing qualitative research problems. Different disciplines and communities of practice draw on different philosophical traditions to inform their research practices. An example of a community of practice is 'learning sciences' whose members largely frame their research problems based on the principles of constructionism (Sawyer, 2006). Second, qualitative research "has no theory or paradigm that is distinctly its own" (Denzin & Lincoln, 2018, p. 12). Different qualitative methodological approaches are "linked to different beliefs about what there is to know about the social world and how to find out about it" (Snape & Spencer, 2003, p. 22). Qualitative research comprises analysts employing a range of worldviews from positivism, post-positivism, feminism, critical theory, to participatory and constructionism (Creswell, 2013). Third, qualitative research does not discern specific methods for studying social life. Qualitative research is multidisciplinary in that it borrows its research methods and tools from different fields and disciplines.

The most common genres of qualitative research methodologies include phenomenology, ethnography, case study, grounded theory, poetic inquiry, critical studies, ethnomethodology, and feminist inquiry. Even though all these inquiry variants fall into the

broad area of qualitative research, they employ unique styles of research and use specific methodological approaches (Yin, 2016). This diverse range of methodological approaches makes it difficult for researchers to come up with a lean definition of qualitative research (Yin, 2018). Instead of claiming to define qualitative research, with a narrow definition, leaving out other significant variants of qualitative research approaches (Yin, 2018), I briefly explain the most basic features shared by interpretive researchers from different disciplines, fields, professions, and communities of practice, who identify with different paradigms and use a range of methods for obtaining qualitative empirical material.

4.3.1 Meaning construction.

The search for meaning appears to be a common denominator for different schools of thought under the umbrella of qualitative research (Jensen, 2002b; Patton, 2015). Sociologists have long recognised that social reality is created through social interaction involving shared activities and practices (Berger & Luckmann, 1966; Marvatsi, 2004). Qualitative analysts pay attention to the way phenomena are socially constructed in real time by entering the 'black box' (Silverman, 2016). The lifeworld of human beings is like a 'black box' not understood from the outside. Qualitative research is a window to the lifeworld of human beings—their lived experiences primarily concerned with meanings as experienced in those life-worlds. Human beings experience events as meaningful (Jensen, 2002b). Qualitative research analysts "have a special interest in human meaning and interaction as viewed from the perspective of people" being studied (Jorgensen, 1989, p. 13). Individuals usually contextualise the meanings they attribute to everyday events and experiences in real-life conditions where they conduct their lives (Yin, 2018). A focus on the contextualised meanings is perhaps the most primary principle of qualitative study because each setting has a unique cultural pathway or blueprint that guides individual actions, activities and interactions (Weisner, 2002, 2013). Qualitative approaches enable researchers to obtain insights loaded with 'contextual richness' of the studied settings (Yin, 2016). The value placed on the lived experiences of individuals makes qualitative research appropriate when one is interested in "locating the meanings people place on events, processes, and structures of their lives and for connecting these meanings to the social world around them"(Miles, Huberman, & Saldaña, 2014, p. 11).

In relation to digital media use, qualitative research examines the routine practices in which digital media is recruited to make those practices possible, and meaning can only be inferred by examining and making sense of how individuals construct those practices (Brennen, 2013). Jensen (2002b) has observed that "[t]he textual contents of the technological media, but also their materiality, scheduling, and social uses are studied by qualitative research in order to explore empirically how the media generate meaning" (p. 236). Thus, it is a truism to argue that qualitative digital media researchers seek to understand how individuals use digital media to construct social reality, in particular situations or circumstances (Brennen, 2013; Couldry, 2012; Couldry & Hepp, 2017; Jensen, 2002a, 2002b). I must note here the meanings of lived experience reported by qualitative analysts. The note concerns the interpretative nature of qualitative research. The meanings we present after analysing the lived experience of people are not genuinely objective—they may not depict an accurate picture of the studied group because they are our interpretations (Miles et al., 2014; Miles, Huberman, & Saldaña, 2019). Stake (2010) expounds on the art of interpretation in qualitative research:

> Interpretation is an act of composition. The interpreter takes descriptions and makes them more complex, drawing upon a few conceptual relationships … He or she might take an episode observed at a workplace and give it a personality, history, tension, and implication. The best interpretations will be logical extensions of the simple descriptions but also will include contemplative, speculative, even aesthetic extension. The reader will be deceived if allowed to think that these interpretations had been agreed upon, certified in some way. They are contributions of the researcher, written so as to make it clear they are personal interpretations. All people make interpretations. All research requires interpretations. Qualitative research relies heavily on interpretative perceptions throughout the planning, data gathering, analysis and write-up of the study. (p. 55)

Stake suggests that by studying individuals or phenomena in their natural settings, qualitative researchers aim to interpret the unique contextualised meanings people attach to their actions and events in their everyday real-life conditions. Investigating the lived digital media experiences of children in families may require researchers to be sensitive to the subjective perspectives of family members including the studied children as well as their own subjective standpoints (Marvatsi, 2004). This means that the focus is placed on how the research

participants understand and give meaning (Marvatsi, 2004) to their own digital media activities and practices. Additionally, because researchers also bring their subjectivities to the interpretation of qualitative data, their personal feelings are also incorporated in the analytic processes (Marvatsi, 2004). Tapping the subjective meanings while appreciating that there are multiple realities is the central role of the researcher as s/he attempts to understand and explain meanings from others' perspectives. Understanding individual actions entails trying to understand their cultural and historical conditions that shape their actions.

4.3.2 The researcher as the instrument of data generation.

Interpretive research is a personal endeavour (Patton, 2015). The researcher is the primary instrument used to obtain data in qualitative research. While quantitative researchers use standardised instrumentation, qualitative researchers usually have relatively little or no standardised instruments for data generation (Marvasti, 2004). The researcher must enter the lifeworld of the studied group and capture as much information as possible by being attentive to the events occurring in the studied setting. The researcher needs to have an element of empathetic understanding during this process of interacting with the participants and obtaining deep insights from the inside (Stake, 2010). The qualitative researcher does not come to the research site as an empty vessel; she or he has a biography which is brought along (Denzin & Lincoln, 2011; Denzin & Lincoln, 2018). Denzin and Lincoln (2008) observe the researcher while researching and writing about a social phenomenon:

> [s]peaks from a particular class, gendered, racial, cultural, and ethnic community perspective. The gendered, multiculturally situated researcher approaches the world with a set of ideas, a framework (theory, ontology) that specifies a set of questions (epistemology), which are then examined (methodology, analysis) in specific ways. That is, empirical materials bearing on the question are collected and then analysed and written about. Every researcher speaks from within a distinct interpretive community, which configures, in its special way, the multicultural, gendered components of the research act. (p. 11)

What Denzin and Lincoln (2008) imply is that the researcher observes, records, analyses, interprets and presents findings from a particular lens. Put blatantly, qualitative, unlike quantitative research, which claims to be 'value-free,' is, 'value-bound' (Yin, 2016). Qualitative

research is an interpretive enterprise that lacks standard formulas or approaches for interpretation (Saldaña, 2015). Interpretation of qualitative empirical material for the most part depends on the researcher's biography. Researchers can also bring their belief system or worldview as the motivating force for defining and conducting research in the first place (Yin, 2016). Patton (2015) observes that whatever you bring to the research—background, experience, interpersonal competence—and how you engage in fieldwork and data analysis, determines the quality of the findings.

4.3.3 Participants are the experts.

One of the reasons that researchers decide to research a social or psychological issue is because they have limited or no understanding of it. When they go out into the field to gather materials about unfamiliar local cultures, they need to act and behave like students who have a genuine interest in learning more about a topic that interests them. Research participants may be 'lay persons' or even 'primitive people', yet they remain the experts of their lives. Qualitative researchers make use of human experience in terms of routine practices that are used in a community to order the everyday lives of its members. The person who has this experience is the research participant. Research participants are experts in qualitative research because analysts rely on their accounts for meaning making and construction of social reality (Corbin & Strauss, 2015; Patton, 2015). As a researcher, you are an alien with respect to how people attach meaning to the events in their lives. The locals are the owners of the culture and practices of their community and they understand it better than anyone else.

There is no doubt you have extensive experience in life as a person, but it is most likely that you have not experienced the events that are happening in the lives of the people you are studying and that is precisely the reason for doing research. Even if you experience similar events, your experience is most likely different with unique outcomes. Qualitative researchers are interested in 'insider' perspectives, and it is the participants who possess such a perspective (Patton, 2015). Research participants are the authors and hence, experts of their lived experiences—they should be viewed and treated as such. Researchers are experts in academic knowledge; participants are not. Research participants are experts in local knowledge; researchers are not. When qualitative researchers set out to conduct a study, they are seeking

insights about local and not academic knowledge (Patton, 2015). The best they might do is give local knowledge an aesthetic value in terms of academic interpretation.

4.3.4 Iterative analysis.

The approach to qualitative data analysis is inherently iterative. Iteration in qualitative research analysis refers to the process of settling on ideas, concepts or themes through multiple rounds of analysis. Qualitative research does not follow a linear process—it is necessarily fuzzy and recursive (Denzin, 2001; Guba & Lincoln, 2008; Stake, 1998). It relies on an iterative process in theorising social actions, reactions and interactions as enacted in time and space (Yin, 2016). The repeated rounds of analysing qualitative data should not be seen as a mechanical process, rather, as a way of reflective thinking through the data corpus, comparing, contrasting, examining, interpreting and creating plausible themes (Creswell, 2014). Berkowitz (1997) provides a summary of the iterative process of data analysis as a key characteristic of qualitative analysis:

> Part of what distinguishes qualitative analysis is a loop-like pattern of multiple rounds of revising the data as additional questions emerge, new connections are unearthed, and more complex formulations develop along with a deepening understanding of the material. Qualitative analysis is fundamentally an *iterative* set of processes. (p. 2, emphasis my own)

For Berkowitz (1997), researchers need to have a set of questions as they go through the data corpus that sensitise him/her to the probable themes, the deviations from general patterns and possible factors that account for the deviations, and the like.

Quantitative analysis follows a highly linear, prespecified methodology where instruments are designed, and data is collected, and then analysed. In qualitative research, data generation, analysis and interpretation almost begin at the same time and continues through the process each influencing the other (Corbin & Strauss; Merriam, 1998). Qualitative analysts believe that it is advantages to begin doing preliminary analysis and interpretations as the process of data generation continues. Merriam (1998) argues that doing so allows for the development of "emerging insights, hunches, and tentative hypothesis" which "direct the next phase of data collection, which in turn leads to refinement or reformulation of questions" (p.

151). Unlike in qualitative research where data analysis is often done after all surveys have been completed, data generation and analysis in most cases happen simultaneously in qualitative research (Corbin & Strauss, 2015).

4.3.5 Reflexivity.

Qualitative research is a highly reflective undertaking. I have already acknowledged that the researcher is the most crucial instrument in data generation and analysis. I have also argued that the researcher arrives in a research setting with a personal biography, which determines how the research will proceed. The moral principle of qualitative research is to be as objective as possible not to impose your presumptions on the meanings that people attribute to events happening in their local environment (Denzin, 2001; Denzin & Lincoln, 2005). To maintain objectivity, the researcher necessarily brackets or suspends preconceived ideas about the subject matter. Although it is never entirely possible to hold in abeyance the preconceived judgment about the phenomena studied, the researcher has to be aware of his or her own presumptions and be open to learning new things about the phenomena. Qualitative research places primacy on etic and emic perspectives (Jensen, 2002b). The qualitative analyst strives to understand events as experienced from the inside (emic perspective) as well as interpret the events as experienced from outside (etic perspective) (Jensen, 2002b; Yin, 2016). The insider-outsider dialectic requires the researcher to be consciously aware of his or her own presumptions in the process of data generation, analysis and interpretation of the findings.

Even though contextual constructionist ontology holds that we cannot have access to objectivity, I did not want to let my own arguments 'run loose' (Silverman, 2016). By observing the everyday settings, I immersed in the social contexts where parents and young children conducted their everyday lives with and around digital media. Yin (2016) cautions the qualitative researcher to be aware not to 'go native' and forget the objective that took him or her in the research setting. By 'going native' Yin (2016) imagines a situation where the researcher through continuous interaction with the studied group becomes "a full-fledged member of the setting" and slowly loses the research perspective that took him/her to the field (p. 118). One of the solutions to avoid the risk of losing the research perspective is to debrief with colleagues not taking part in fieldwork (Yin, 2016). The strategy that Yin (2016) proposes—that of debriefing with colleagues was helpful in this study because at times I felt completely lost while in the

field, as I was unsure of exactly what was of primary importance when generating data. The regular communication, update and discussion with my supervisory team had a dramatic effect on sharpening my research perspective particularly on the things that I had to pay attention to while videoing children and parents in their homes. The constant communication with the supervision team helped me to detach myself from these settings and be a 'researcher' so that I could report the social meanings as they were and not be trapped in the settings and forget who I was and what purpose took me to those settings (Silverman, 2016). Creswell (2009) advocates for self-reflection and clarification of worldviews brought into the study. He argues that the process of self-reflection brings openness into a narrative that will most likely resonate with other investigators and readers.

4.4 Methodological Strategy: Qualitative Case Study

Advocates of a qualitative case-based strategy value this approach for delving into people's lives and assisting with understanding the meanings that the studied group ascribe to everyday events and social phenomena (Patton, 2015; Stake, 2010; Yin, 2014, 2018). A variety of disciplines including economics, political science, sociology, cultural studies and education use case studies (Yin, 2009, 2018). In early childhood, researchers use case studies widely to explore different issues, such as home literacy experiences, (Owodally & Mooznah, 2014), teachers' and parents' perspectives about young children's transition to pre-school (Turunen, 2012), emergent literacy (Sinclair & Golan, 2002), information technology in early years classrooms (Fields, 1991), digital practices of young children in homes and preschools (Edwards et al., 2017), family digital literacies (Marsh et al., 2015), and everyday uses of digital technologies by young children (Plowman, 2015).

A case study is a science of the particular (Stake, 1995, 1998, 2010; Yin, 2018). Yin (2009) conceives a case study as a research design that involves: a) the study of a "contemporary phenomena" in its real-life setting, particularly when, b) the boundary between the issue being investigated and the setting is not visible (p.18) , with the aim of obtaining detailed insights about a single case (Bryman, 2012; Yin, 2011, 2014, 2016, 2018), or multiple cases (Creswell, 2013; Merriam, 1998; Stake, 1995, 1998, 2010; Yin, 2009), especially when there is no intention to manipulate the behaviour of participants (Yin, 2009). The exponents of case study design focus on the complexity of the case in question (Bryman, 2012), with the

primary objective of obtaining in-depth insights of the case (Woodside, 2010) “bounded by space and time” (Hancock & Algozzine, 2006, p. 11). Qualitative case studies allow for exploration of social phenomena in real-life situations through a variety of data sources such as observations, interviews, videoing, and documents (Baxter & Jack, 2008; Bryman, 2012; Creswell, 2013; Yin, 1981, 2009). This is because case studies are not bound to specific kinds of data evidence and are used both by qualitative, quantitative and mixed method researchers (Yin, 2009, 2014).

Although Yin (2018) acknowledges that case studies suit many research traditions, his analysis leans more toward the positivist tradition usually used in quantitative research possibly attributed to the understanding that with a background in experimental psychology, he has learned the ways of conducting controlled experimental research (Yin, 2018). In contrast, Stake (1995, 1998, 2010) and Merriam (1998) considers that qualitative case studies in most instances assume a constructivist perspective—a philosophical understanding which assumes that reality is relative and varies widely based on the individual perspectives of those who experience some social phenomena the researcher seeks to examine. The ontological underpinning of qualitative case studies is that reality is socially constructed, giving rise to multiple perspectives about a single entity or object of study (Hancock & Algozzine, 2006). These multiple perspectives of people taken together reflect social reality within that specific setting at a particular point in time (Creswell, 2013; Yin, 2009). Baxter and Jack (2008) establish that the researcher needs to work together with the participants, while at the same time giving the participants enough opportunity to articulate their thoughts about the studied topic.

This study was a single case. Even though I observed eight families, that is, eight different home ‘settings’, my aim was not to take the eight homes as the units of analysis. My unit of analysis in this study was joint media engagement activities and/or features. In other words, the phenomenon paid attention to across the eight families was joint media engagement between the parents and young children, resulting in dealing with a single unit of analysis cutting across all the eight homes. Yin (2009) argues that the unit of analysis determines whether a researcher uses single or multiple case studies. I did not use the homes as the units of analysis because I did not seek to analyse homes; I sought to analyse the joint digital media activities and/or practices that happen in those homes. My selection of the joint media

engagement activities /practices as the unit of analysis is consistent with my theoretical grounding. Socio-contextual perspectives takes 'joint activity' or 'agents-acting-with-mediational means" as a unit of analysis (Bronfenbrenner, 1977; Engeström, 1999; Erstad & Wertsch, 2008; Rogoff, 1993, 1995, 2003; Rogoff et al., 1993; Tudge, 2008; Tudge et al., 2011; Tudge & Hogan, 2005; Wertsch, 1991, 1994).

Just like any other research strategy, qualitative case studies have distinct advantages and disadvantages. On the one hand, case studies are advantageous because of their capability to illuminate more in-depth insight into a complex problem, which is not achieved through quantitative strategies such as surveys (Creswell, 2013; Yin, 2009). On the other hand, some research communities highly contest scientific generalisation of case study results (Yin, 2009). As qualitative case studies employ non-probability sampling strategies, and use small samples, not representative samples, quantitative researchers continue to identify this as a limitation in the sense that case study inferences are not seen as transferable to larger populations (Bryman, 2012; Creswell, 2013; Denscombe, 2007). However, Yin (2009) who is one of the most cited authors on case study research designs (Duff, 2008), demonstrates that, just like in experimental research designs, case study findings can be generalised, but differently.

Yin (2016) notes that researchers who continue to question the generalisation of case study findings do so based on misconceptions about the concept of 'generalisation' itself. Among researchers, the concept of generalisation invokes the understanding of extrapolating the findings obtained from a segment of individuals, to a larger population where the studies sample was drawn (Yin, 2009, 2014, 2016, 2018). The assumption underlying this way of thinking is that the studied segment of a population statistically (chosen by probability sampling strategies) represent the larger population (Bryman, 2012; Creswell & Poth, 2018). To many researchers, generalisation is narrowly conceived to mean making statistical inferences—'statistical generalisation' (Yin, 2014). Statistical generalisation is the general form of extrapolating research findings from selected 'samples' to the wider 'populations' from which the selected sample originated. Yin (2016) finds a problem with the generalisation of findings from single experiments and equates that problem to generalising from small scale qualitative studies such as single case studies. He asserts that if quantitative researchers pose the question, "How can you generalise from a case?" the same question can be asked of a single experiment. He

concludes that "case studies like experiments are generalisable to theoretical propositions and not to populations or universes" (Yin, 2009, p. 15). To counter 'statistical generalisation,' Yin (2016) proposes 'analytical generalisation,' a process that requires qualitative investigators to relinquish all the notions around samples and populations. Analytical generalisation involves making inferences not to populations but to theoretical propositions, which may resonate to many researchers (Yin, 2018). Analytic generalisation in qualitative inquiries occurs when " a previously developed theory is used as a template with which to compare the empirical results of the case study" (Yin, 2014, p. 38). Yin (2016) succinctly states that:

> The aim is not to consider the case in such a study as a sample of a larger population of like cases, but to discover patterns and processes within the case and to use analytic generalisation to extract the lessons learned. (p 105)

This reasoning was precisely my objective in this study. I sought to expand on the theoretical understanding of joint media engagement from a socio-contextual perspective.

As noted earlier, case studies are bounded by time and space. Case study results are contextual and understood in relation to the context of the studies (Stake, 1995). Yin (2009) asserts that "you would use a case study method because you wanted to understand a real-life phenomenon in-depth, but such understanding encompassed important contextual conditions—because they were highly pertinent to your phenomenon of study" (p. 18). This characterisation of a case study by Yin (2009) is consistent with the theoretical perspectives discussed in the previous chapter. Socio-contextual theoretical perspectives examine the contextual features of the environment and how they affect developmental processes in situ. Bronfenbrenner (1977) defined a setting "as a place with particular physical features in which the participants engage in particular activities in particular roles for particular periods" (p. 514). Consequently, he perceived "place, time, physical features, activity, participants and role" as the basic elements that characterise a given setting or ecological niche (p. 514). These ecological features make possible or afford joint activities and interactions—*proximal processes* (Bronfenbrenner, 2005).

4.5 Research Setting

The present study was carried out in Nairobi County in Kenya. I have already acknowledged that there is less empirical work detailing young children's relationship with

digital media in developing countries and particularly in continental Africa (Marsh, 2015). One of the reasons contributing to the lack of research on this subject matter may be because early childhood as a field of study in Africa is relatively new; it is in its infancy stage, with very few scholars engaging with early childhood issues as far as research is concerned. Another reason could be that until recently, technology has not featured as a priority research area in most African countries. Research on educational technology in early childhood is emerging. The fact that there was lack of literature about children's use of digital media in homes in developing countries was an excellent motivator for me to conduct a ground-breaking study in an African country and my supervisors welcomed the idea providing all the necessary support. The Australian Catholic University through the Institute for Learning Sciences and Teacher Education generously funded my fieldwork in Kenya. The idea behind this project was to obtain nuanced understandings of the social and communicative features that are present in joint media engagement between parents and young children under three years in the home setting in Kenya.

The study targeted urban families in Nairobi County in Kenya. Nairobi is Kenya's capital city and is fast growing in terms of infrastructure and population. I chose Nairobi County as a research site with the assumption that urban families were more likely to have access to digital media compared to rural families. My research topic, exploring joint media engagement in homes demanded that I target media-rich homes. At the time of conducting this study, there was little information about digital media saturation in Kenyan families accessible online. Such statistical infromation would have benefited a novice researcher in identifying families that met my criteria.

Kenya is an emerging economy in Africa with most development occurring in cities, particularly in terms of electricity and internet connectivity. Because of the observed infrastructural development in Nairobi County and a considerable population being in employment, I assumed that it would be easier for me to recruit families that own a variety of digital media for young children and general family use. Kenya has significant infrastructural barriers to supporting digital media use in rural parts of the country where the majority of the population reside. For instance, according to the Communications Authority of Kenya (CAK) (2018), there is a very low level of internet and electricity connectivity and it is even non-existent in some rural parts of Kenya. In terms of broadband connectivity, 83 per cent of Kenyan

homes remain unconnected (CAK, 2018). However, the majority of Kenyans access mobile internet subscriptions through 3G and 4G. Still, the use of mobile internet is challenging in some regions because mobile subscribers have to walk more than two kilometres to access cellular signals (CAK, 2018). In addition, most families in these areas do not have enough financial capacity to own a wide range of digital media. The poverty index is high among rural families, and this may curtail family efforts to acquire a wide range of digital media in their homes. Research has shown that digital media access strongly correlates with household income (Selwyn, 2012). The rural families were deemed not suitable for this thesis and were therefore not included for participation.

Five of the participating families came from Kibera, a vast unplanned Nairobi settlement. Two of these five participating families resided in the middle of Kibera slum teeming with mud walls, wooden and rusted iron-roofed buildings with open sewage running through tiny corridors that separated the buildings. The corridors crowded with laundry lines that are too low that adults had to stoop or dodge the laundry to walk through to the houses. There was hardly any space left in this unplanned urban settlement for use as play spaces for young children. Nevertheless, children were playing in the tiny corridors with traditional toys such as polyethylene balls. These two families lived in small single-roomed houses. The windowless rooms were partitioned into two using a piece of cloth to separate the sleeping area where there was a bed and the living space. At the back of the bed, there was a minimal space where cooking took place.

Three of the five families resided on the edges of Kibera slum. Although they lived in small rooms, the buildings were modest with lockable iron gates. The architectural planning was also much better. There was enough space left in front of the buildings where children could be seen playing. This part of the urban settlement was slowly developing with many high-rise buildings under construction. Two families lived on the second floor of a four-floor building. Their houses comprised of two rooms where one room doubled as a bedroom and kitchen and the other as the living room. When I was around, all family interactions with digital media took place in the living rooms. The other family lived in the adjacent estate across the road. The family owned a cybercafé located at a shopping centre, approximately a kilometre from the house. That is where all my video observations took place.

The remaining three families lived in other less crowded suburbs. Two of these families lived in gated communities, with many play spaces for children. They lived in three-bedroom houses. The last family lived in a two-bedroom apartment on the fourth floor of a five-floor building.

4.6 Sampling Strategy

Snowballing sampling strategy (Bryman, 2012) was used to obtain families that participated in this case study. Snowballing is a non-probability sampling procedure commonly used to identify research participants exhibiting traits that the researcher is interested in exploring. This sampling strategy is used "when the members of a special population are difficult to locate" (Rubin & Babbie, 2010, p. 149) or when the population is hidden such as drug users(Bryman, 2012) . A common misconception that is historically associated with snowball sampling is that the strategy is used to recruit participants when researching sensitive topics (Rubin & Babbie, 2010). The argument underlying this misconception is that when researching sensitive topics such as drug sellers and users, it is hard to locate those in such a business because knowing them increases the chances of exposure to law enforcement agencies (Burgess, 1984; Yin, 2018). While this is true in some respect, I argue that snowballing is valuable to recruit research participants when a researcher is researching a little-known topic. In the case of the topic of this thesis, the field widely acknowledges that researchers know little about young children's engagement with digital media (Plowman, 2015) especially in developing countries (Marsh, 2015). At the time I was going into the field to generate data for this thesis, there was no literature about the prevalence of digital media in Kenyan homes or families. Furthermore, there was no data about young children's access to and use of digital media in homes. In the absence of such vital information recruiting families to participate in my study proved challenging. The point of departure was to use my social networks to identify one or two families, who were helping their children under three to use digital media.

Snowballing denotes a process of accumulating sampling units one at a time. Burgess (1984) states that this sampling strategy is highly dependent on the researcher's familiarity with the social situation. The procedure involves getting in touch with a small number of research participants deemed suitable for providing appropriate data to illuminate on the researcher's subject matter (Bryman, 2012). Once the initial contacts are made, the researcher commences by

using the initial contacts who help to establish links with other potential participants possessing the sought after traits (Bryman, 2012). The process goes on and on until the researcher gets to a 'saturation point' such that he or she is no longer obtaining new data. In a nutshell, snowball sampling method exploits the social networks and social relation patterns of the initial contacts (Burgess, 1984).

The snowball procedure of recruiting families began with a discussion with my partner who, at the time worked in a children's home in Nairobi. She then discussed with her colleagues who knew families that had children in the age range of birth-to-three years. Fortuitously they promised her they would ask them if they would be interested in participating in the study. I gave my partner the participant recruitment advertisement I had prepared for distribution to the interested families. This strategy worked so well that I accumulated seven families in two weeks with the eighth family recruited through my social networks towards the end of my fieldwork. Videotaping for this family was completed on four consecutive days in the last week of fieldwork before I flew back to Australia.

4.7 Sample Size

Qualitative research projects making use of visual methods require researchers to be in contact with the research participants, to observe and talk to them to understand the events and the meaning making processes of people (Stake, 2010) as part of the epistemological basis of qualitative research. I had initially planned to recruit four families with children under the age of three to participate in the study. The assumption made was that the small sample of four families would allow me to observe each family more intensively and over a more extended period. Many social scientists claim that researchers using qualitative case studies employ small sample sizes so that they can observe them closely and intensively (Bryman, 2012; Lincoln & Guba, 1985; Merriam, 1988, 1998; Stake, 1995; Yin, 2018). However, because of the unpredictability of families in relation to whether they would continue to participate until the end of the study, I decided to recruit eight families, pleasingly, all the eight families did participate until the end allowing data analysis of all.

Video research is time-intensive in terms of recording, reviewing, coding and analysing (Derry et al., 2010; Flewitt, 2006; Silverman, 2006, 2014a, 2016, 2017). My initial plan was to

observe each family once a week for eight weeks. This plan did not work practically. Family observations of no more than six times per family occurred. As five out of the eight families came from an unplanned settlement in Nairobi where parents' main economic activity was business, it was impossible to visit all the families once a week for eight weeks. The only time these families could allow me to make the observations was during the weekend. Even during weekends, they chose preferred times which clashed, or children were unwell or moody, making it impossible to observe all of them during the weekend. I stopped the observations when I felt I had reached saturation point because the same activities were occurring repeatedly in every observation session.

4.8 Participating Children and Family Profiles

4.8.1 Ian and his family.

Ian was the first-born son in a family of two children by the end of fieldwork. When I began filming Ian, his mother was expecting, and she gave birth to a baby girl in August when I was almost finishing my fieldwork. Ian was three years old when I started filming him. He attended daycare where his parents paid roughly 25AUD per month. The main activity at the daycare as reported by his mother was playing. Ian's mother did not have a formal work at that time, and she did irregular housekeeping work. Because parental occupation was not among the conditions of the setting I was paying attention to in my study, I did not go into details of the nature of her housekeeping duties.

At some point, I felt I was asking inappropriate questions touching on the privacy of the families. On the one hand, I thought I was intruding into the private life of families by asking such details but on the other hand, how would I have known the families' abilities to afford digital media in their homes and have time to interact with young children? Ian's father, a businessman, owned and ran a cybercafé near his house. Ian had access to a digital television, DVD player, a PlayStation that he rarely used, and his parents' smartphones at home. He did not own any digital media device, like all the other child participants in this study. He liked playing games on the television using the remote control. He was also proficient in using a desktop computer in his fathers' cybercafé as reported by his mother. Ian's father was hugely interested in computers, and even with no formal computer technician training, he repaired computers. Ian's mother did not have a great interest in digital technologies, but nonetheless, she allowed

her son to access and use digital media. She was also keen to help his son use technology appropriately.

4.8.2 Brenda and her family.

Brenda was two years, three months when I began the study. She was the second born and youngest in the family of two children. Her brother was ten years old and attended a local primary school. He was in standard/grade four. Brenda did not attend daycare. At home, she had access to digital TV, DVD player, CDs, parents' smartphones, and regularly, her mothers' sister came around with a laptop. She had many traditional toys, particularly for girls, some of which she always arranged on the couch. Brenda's parents were business people. Her mother also worked with youth and community groups as a youth peer provider (YPP). Brenda's family lived in a single-roomed house. Just like Ian's family house, Brenda's family house was partitioned using a piece of cloth to separate the sleeping and the living area. The tiny space left behind the bed was used for cooking. The family had been living in that room for the past six years. Brenda's parents liked to use digital media, and they often allowed children to access and use digital media. Brenda and her sibling, like the majority of young children in Kenya did not own any digital media technology.

4.8.3 Lavender and her family.

Lavender was one year and eleven months old—the youngest child participant in my study. She was the firstborn and the only child. She stayed with her mother as her father worked in a different county. Her mother was a teacher in a prestigious Montessori preschool located in an adjacent suburb among the most expensive suburbs in Nairobi for living. They lived in a two roomed house that was always dimly lit during the day, so I had to request an open window, and lights turned on to enable me to record clear videos. At home there was a digital television, DVD player, and the mother's smartphone, all of which Lavender accessed and used daily. She loved playing outside with her friends. While indoors she played games, listened to nursery rhymes, and recorded music, watched recorded videos of birthday parties, and church services, among others. Her mother commented that she usually helps her to search for things she would like to see on the smartphone but does not know where to find them. Lavender attended a local daycare located in the slum while her mother was at work.

4.8.4 Joy and her family.

Joy's like Lavender's family lived in a two roomed house on the second floor of a four-floor building. Joy liked to play outdoors together with Lavender and other children in the neighbourhood. She was three years when I started observing her use of digital media together with her mother. Joy was the firstborn in a family of two children. Her brother was ten months old. Joy attended preschool but had not attended daycare before joining preschool. She had access to television, DVD player, and smartphones. Her mother was a homemaker and liked watching television. Joy's father worked as a driver for a public service vehicle company. Joy used her mother's phone to play games, view photos and listen to nursery rhymes.

4.8.5 Pauline and her family.

Pauline was three years old when my fieldwork began. She was attending preschool at the time. She was the firstborn, and the only child raised by a single mother who was a businesswoman. One of the businesses she ran was the cybercafe, and she also had a butchery. All my video observation records took place at the cybercafé on Saturdays. At the cybercafé, there was a desktop computer, a laptop and two smartphones—for her mother and uncle who worked as a cybercafé attendant. She used the desktop computer and smartphones to play games, laptop for watching cartoons, Angry Bird shows, among other shows. Just like many businesses in the slum, the cybercafe stood on a very busy road crowded with pedestrians, public transport buses, motorists, and cyclists. Adjacent to the cybercafe was a welding business. As a result, there was much noise, and in most of my video records, I had to strain to hear the conversations taking place between Pauline and her mother while they were using digital media. The cybercafe was also very small, and I had to record from close range, and which could not effectively capture the whole bodies of Pauline and her mother. With naturalistic data, you work with what nature provides!

4.8.6 Andrew and his family.

Andrew's family stayed in a modest outskirt suburb approximately twenty-five kilometres from Nairobi city. They lived in a three-bedroom stand-alone house with a keyed iron gate. Andrew's mother was working as a nurse in a prestigious city hospital. The father was working as a language therapist. They always went to work very early in the morning before Andrew woke up and they would return in the evening around 6-7pm with the mother arriving

earlier than the father. The family owned a digital television, smartphones and a laptop; the laptop used mainly for work related tasks by the father. There were also game consoles, DVDs and other electronic toys such as cars owned by Andrew. Andrew mostly used his father's smartphone for games and phonics apps; his mother's smartphone had no games installed. Both parents were helping him to use digital media. Andrew's father being a language therapist was very enthusiastic about digital technologies, and he was always talking about doing research online and identifying apps that would help him learn language.

4.8.7 Brian and his family.

Brian was the third-born child in a family of three children. He had a teenage sister who had just finished her secondary education, waiting to join University and Isabella – five years old in preschool. Brian was two years, two months old. He did not attend daycare he stayed at home with his mother, who was unemployed at the time. She was a trained preschool teacher. His father was furthering his studies abroad. The family lived in a three-bedroom apartment in a gated community staffed by private security; the only family connected to fibre-to-the-building internet. In addition to internet, Brian had access to television, DVD player, tablet and smartphones. His mother indicated that she often helped him use digital media for learning.

4.8.8 Cherry and his family.

Cherry was one year and eleven months when the observations began. He was born on 17th September 2015. His was the last family I observed in early September 2017—he was about to celebrate his second birthday. Cherry was the last-born in a family of two children. He enjoyed a close relationship with the family members but was closest to the dad. He loved accompanying his mother to a nearby primary school where she was working as a preschool teacher at the time. The only activity he did at the preschool was play. His father worked as a teacher instructor with a local organisation operating in schools within the informal settlements of Nairobi. Cherry had salient access to digital media in their house and a relatively good time to interact with the said media both alone, with parents, sister, auntie and other young children from the neighbourhood. He accessed a digital television, laptop, DVD player, woofer, smartphones and a tablet at home. Like other children who participated in this case study, Cherry did not own any of the digital media devices but enjoyed full access most of the time. He liked playing games on the tablet, especially car racing and children's singing games installed

therein. He enjoyed using the tablet more than the other digital media at his disposal especially alongside his dad who spend a better part of his afternoons working on his laptop—preparing reports for his teacher evaluation related activities. The mother on her part enjoyed free time watching TV and using her smartphone to access the internet, and like Cherry's father, she was actively involved in helping him out with his games and even sometimes challenged him in car racing. She was also keen to help her son use technology appropriately.

Table 1

Participating family demographics

Focus Child	Age	Digital media accessed	Social partner in JME	Education level and occupation of social partner
Ian	3 Years	Digital TV, PlayStation, DVD player, smartphone	Mother	Secondary education House-keeping menial jobs
Brenda	2 Years 3 Months	TV, DVD player, laptop, smartphone	Mother	Secondary education House-keeping and youth leader
Joy	3 Years	TV, DVD player, smartphone	Mother	Secondary education House-keeping menial jobs
Lavender	1 Year 11 Months	TV, DVD player, smartphone	Mother	Tertiary college Preschool teacher
Pauline	3 Years	TV, DVD Player, Smartphone	Mother	Diploma Businesswoman
Andrew	2 Years 2 months	TV, DVD Player, smartphones, laptop, game consoles	Father Mother	University Degree Language therapist Tertiary college Nurse
Brian	2 Years 2 Months	Internet, TV, DVD Player, laptop, tablet	Mother Sister (4 years 11 months)	Tertiary college Unemployed Preschooler
Cherry	1 Year 11 Months	TV, DVD player, laptop, tablet	Father	University Degree Teacher evaluator

4.9 Data Generation and Analysis

Data collection or generation? I deliberately used the concept of data 'generation' as opposed to data 'collection' based on my relativist ontological and interpretive epistemological grounding. In my view, data 'collection' denotes a positivist orientation which holds that reality is out there independent of the observer and can, therefore be 'collected' through well-designed methods. Being a socio-contextual constructionist researcher, the application of the concept of data 'collection' does not align with my ontological and epistemological assumptions. Research is a social construction and scientists who study social life are inherently involved in the process of constructing meaning and providing plausible interpretations of constructed social reality (Corbin & Strauss, 2015; Silverman, 2006). The researcher enters into a relationship with research participants that allows the construction of reality through negotiation and mutual collaboration (Marvasti, 2004). Social reality, between the researcher and participants, does not exist prior to the establishment of their relationship, and therefore, nothing is there to be 'collected'. The idea behind the concept of 'data generation' is that social reality emerges during the relationship that the researcher forges with the studied group (Berger & Luckmann, 1966). Creswell (2013) acknowledges the complexity of the process of data generation, which involves "gaining permission, conducting a good qualitative sampling strategy, developing means for recording information both digitally and on paper, storing the data, and anticipating the ethical issues that may arise." (p. 145). I used video observations to generate data with families with a focus on parent-child dyadic interactions with and around digital media.

4.9.1 Video observations.

I have already mentioned that qualitative case study research takes place in real-life conditions of research participants (Yin, 2014, 2018). In most of these cases, researchers are interested in understanding how the real-life conditions structure the everyday lived experience of people. The context or more specifically, the elements of the setting or contextual factors (Bronfenbrenner, 1977) "are a fundamental aspect of the research phenomenon" (Lewis, 2003, p. 56). To understand young children's digital media activities and related features requires investigators to observe how children experience digital media as part of the routine activities of everyday life in the settings in which they live. This means that naturalistic data (Silverman, 2006, 2014a, 2017) is the most preferred empirical material for explicating such activities

(Danby et al., 2013). Observation is one of the methods used in obtaining naturalistic data (Lewis, 2003; Silverman, 2006, 2017).

The essence of qualitative research is to interpret the meanings of human existence as expressed by the research participants who directly experience the conditions of existence being sought by the researcher (Jorgensen, 1989; Marvasti, 2004; Yin, 2016, 2018). Saldaña and Omasta (2018) argue that "if human experiences are the primary focus for investigation, then the analysis of human actions and their meanings should be the primary focus of our research" (p. 4). Human interaction is complex and messy (Brennen, 2013; Saldaña & Omasta, 2018). It is by analysing the complexity and messiness of human social life that we come to understand 'how things work'(Stake, 2010). The qualitative analyst, therefore, must employ some method(s) that allow access to human experience as it is "constructed and enacted by people in everyday life situations and settings" (Jorgensen, 2015, p. 1). Understanding human experience involves,

> [p]aying attention to what people are doing and what they are saying. Some of what they do or say is unproductive and silly, but we need to know that, too. A lot of what people do is motivated by their love for families and a desire to help people, and we need to know that, too. We won't just ask them. We will look closely to see how their productivity and love are manifested. (Stake, 2010, p. 2)

In the quote, Stake implies that one finds human meaning in the everyday routines that people engage in and that the most suitable means to access those routines is through observation. Our methods of qualitative research are varied. Interviews, focus groups, and diaries have been widely used to investigate how reality manifests in social life (Miles et al., 2019; Rapley, 2011; Saldaña, 2011, 2015; Saldaña & Omasta, 2018; Silverman, 2017). One-to-one interviews and focus groups form an excellent form of generating empirical material in qualitative research (Silverman, 2017), though they fall short of accounting for real-time embodied interactions (Jorgensen, 1989, 2015; Norris, 2004). Moreover, there is enough evidence suggesting that the accounts individuals provide during interviews of the activities they normally do sometimes contrasts sharply with what they *actually* do (Silverman, 2017). If our interest is to gain insights into what goes on in social interactions that make use of cultural tools such as digital media, "it is not enough just to ask questions" (Silverman, 2016, p. 7). We would

need to “observe the routines and practices of social actors” (Silverman, 2016, p. 7) around digital media (Duncan & Hayes, 2012; Plowman, 2013, 2015; Plowman & Stephen, 2013; Plowman et al., 2010b). Relying on interviews, focus groups, and diaries supplied by parents may deny us access to embodied resources with which co-present social actors employ in their interactions (Heath, 1997; Jorgensen, 1989, 2015; Silverman, 2017).

Observation methods are highly valued (Jorgensen, 1989, 2015) for studying embodied interactions for they permit researchers “primordial scene of social life” where “direct interaction between members of a social species, typically ones who are physically co-present” conduct their lives (Schegloff, 1996, p. 54). Jorgensen (1989) provides a concise summary of what observation methods are capable of: “The methodology of participant observation is exceptional for studying processes, relationships among people and events, the organisation of people and events, continuities over time, and patterns, as well as the immediate sociocultural contexts in which human existence unfolds” (p. 12). Researchers use a variety of strategies to make observations in situ. Some researchers make notes while participating in the social activities of the group they are studying (Corbin & Strauss, 2015; Yin, 2016). While observations and note taking are adopted strategies in use for a long time in qualitative research, it is claimed that one can observe and record just so much (Miles et al., 2019; Saldaña & Omasta, 2018). Furthermore, the human mind cannot recall all the embodied details of an interaction. Based on the frailty of the human mind, researchers sought ways to capture real-time interactions (Derry et al., 2010; Heath, 1997; Heath, Hindmarsh, & Luff, 2010). Ethnomethodology and conversation analysists first began to use audio recordings because this was the only available technology for recording and preserving live conversations for later analysis (Silverman, 2006, 2014a). Although audio records provided valuable tools for analysing talk-in-interaction, a recent challenge for researchers to go beyond ‘talk’ and pay attention to embodied modalities of interaction such as body posture, eye gaze, touch, facial expression and the like revealed the weaknesses of audio records (Silverman, 2017). Joint media engagement is studied by understanding ways in which two or more people use digital media together (Stevens & Penuel, 2010; Takeuchi & Stevens, 2011). I aimed to obtain “an in-depth, individualised, and contextually sensitive understanding” (Patton, 2015, p. 7) of joint media engagement of parent-child dyads.

The use of videos in reaching lived experiences is advantageous in many respects. Video records allowed me to effectively analyse parent-child interactions with digital media because they permitted access to a range of semiotic resources used in the interpersonal interactions (Derry et al., 2010). Besides language in the form of spoken words, the use of videos allowed me to stretch my interest to other non-verbal modes of interaction and communication of parents and children. Yin (2016) suggests that video recording is handy in intimate settings when the researcher's interests stretch beyond words in interactions. Videos also provided me with an opportunity to have repeated viewings during analysis. Video records store live interactions to allow multiple viewings and microanalysis of interactional episodes (Barron & Pea, 2013; Corbin & Strauss, 2015; Derry et al., 2010; Saldaña & Omasta, 2018; Silverman, 2006). In addition, I was able to obtain fine-grained transcriptions during analysis because it was possible to slow down, rewind, and forward the recordings (Derry et al., 2010; Koschmann, 2013). Video records allow researchers to focus on the sequential features of interactions (Corbin & Strauss, 2015; Danby et al., 2013; Jordan & Henderson, 1995; Norris, 2004). It is difficult to remember all the semiotic resources that people use during interactions without live records. Norris (2004) contends that video records permit researchers to analyse semiotic resources employed by people in interactions that would otherwise be inaccessible when merely taking notes.

Despite videos having the previously stated advantages, they also come with some limitations (Derry et al., 2010). A video camera can record only so much. A video camera points in one direction at a time and therefore fails to record all contextual factors that may be relevant to the understanding of the interactions (Derry et al., 2010; Heath, 1997; Sawyer, 2013; Silverman, 2006). For example, when I was filming, I focused the video camera at the parent-child dyad when they used a digital device. I was interested in capturing joint (inter)actions around digital technologies but other contextual factors also influenced the parent-child dyadic encounters in the room. For instance, in most cases, the parent and the child used a smartphone together while the television played in the background. The television appeared to have an impact on the ongoing interactions because parents and children occasionally looked at what was on the television. How could I have captured the interactions with the smartphone and television simultaneously with a single camera? Given that I was recording from close range pointing the camera to the screen of the television would have meant I was not recording the interactions in the focal dyad.

I could not put the camera on a tripod because by doing that I would miss so much information. I wanted to record how parents and children shifted their body postures around digital media and what they were doing on the screens of the digital devices. The screens of smartphones are small, and if you want to see what is happening on those screens, you have to record from close range, yet when you bring the screen of the smartphone into the frame of the camera, you cannot see the full bodies of the parent and the child. Consequently, the strategy used was that of zooming in and out, which could not be possible with the camera placed on a tripod. This practice also limited rich notetaking because I was holding the camera with my hands and focusing on the interaction, leaving me with less chance to make notes. I tried to make notes after the recording, but obviously, the notes were not as rich as they could have been if written during the observation session.

4.9.2 Data analysis: Interactional analysis.

Data analysis refers to the practice of searching "for patterns in data and for ideas that help explain why those patterns are there in the first place" (Bernard, 2013, p. 394). There are no established procedures or methodology for approaching qualitative data analysis (Yin, 2016, 2018). Yin (2009) contends that the "analysis of case study evidence is one of the least developed and most difficult aspects of doing case studies" (p. 127). A significant misconception found in qualitative data analysis especially with analysts who work with data 'ground-up' (Corbin & Strauss, 2015) is the assumption that data can speak for themselves (Silverman, 2014b). Many researchers in this camp hold the view that themes 'emerge from the data'. This assumption is a false one because even with visual materials, we may assume that a photograph is worth a thousand words, but it still needs someone to give it an authentic meaning in a thousand words. Two people will provide different accounts of the same photograph even though both accounts will have a thousand words. In short, qualitative data do not speak for themselves; it is the researcher who speaks (Silverman, 2017). Qualitative analysis implies the researcher has to think qualitatively by working with data and construct meaning in his or her mind (Saldaña, 2015). Themes do not emerge from the datum but are actively constructed by the researcher (Yin, 2018) through the process of iteration (Mayan, 2009) that involves coding, re-coding and constant comparison of codes, categories, themes and segments of data (Corbin & Strauss, 2015). Analysis and interpretation of qualitative material are often approached from particular 'lenses, filters and angles' (Miles et al., 2019; Saldaña, 2011, 2015). Silverman (2001)

succinctly states that “The facts we find in ‘the field’ never speak for themselves but are impregnated by our assumptions” (p. 1). So, the interpretations we offer of case study materials “are never simple reports on ‘events’ but are structured to depict ourselves as particular kinds of people who are usually ‘reasonable’ and ‘cautious’” (Silverman, 2014, p. 39).

This study applied interactional analysis (Jordan & Henderson, 1995; Norris, 2004; Sawyer, 2013) to identify and theorise the social and communicative aspects that constitute joint media engagement. Interactional analysis grew from diverse fields, including interactional sociolinguistics, mediated discourse, and conversation analysis (Norris, 2013). Interaction analysis is interested in different communicative modes that people use to act with cultural tools in sociocultural contexts they are (inter)acting. This approach to analysis was particularly useful for identifying social and communicative features brought along by parents and young children in appropriating digital media. The identified social and communicative features may suggest to us the nature and kinds of learning that is potentially instigated by digital media in interpersonal interactions in family settings.

The dataset generated for analysis included approximately 16 hours of video data that did not contain episodes of joint media engagement exclusively, so I had to focus on some segments of the dataset. It was not my goal to determine how much of the dataset comprised instances of joint media engagement; rather, I was more concerned with the length of the instances. The length of the episodes subjected to micro-analysis ranged from 8-60 seconds. The episodes of joint media engagement for younger children (under 2.5) were much shorter ranging from 8-20 seconds. Three-year-old children had longer episodes of 20-60 seconds.

4.9.2.1 Manual coding.

My coding approach was manual with the help of paper (code-book) and pencil. I initially planned to use Nvivo, a computer software, increasingly used for qualitative data management and analysis. However, the approach, though productive and promising when working with qualitative data corpus, especially visual materials, seemed not feasible, at least in my case. Being a novice in and trying “to learn the basics of coding and qualitative data analysis simultaneously” and “with the complex instructions and multiple functions” (Saldaña, 2011, p. 26) of Nvivo software, the exercise appeared to be double work against the limited time required to complete a PhD. I realised I was spending far too much time learning the technical functions

of Nvivo rather than working with my data. I switched to manual coding so that I could place all my analytical focus on the data. Saldaña (2011) has offered that manual coding is a qualitative analytic strategy that is entirely acceptable for beginner researchers.

4.9.2.2 What was coded?

As I have already indicated in the previous chapters, I was interested in the social and communicative features taking place with and around the collaborative use of digital media between parents and young children. Thus, I was keen to pay attention and code the details of interpersonal interactions (Lull, 1990) which include talk, gestures, body posture, and other semiotic resources used in interactions (Norris, 2004; Scollon, 1998). These semiotic means used in interactions are analogous to Saldana's (2017) action, reaction and (inter)action constituting the organisation of social life.

4.9.2.3 An overview of the data analysis process.

I want to call the reader's attention to two principal constructs that guided the iterative process of data analysis. These constructs are the object and unit of analysis. The object of analysis refers to the purpose or aim of the thesis. What is the thesis about? This thesis aimed to offer a rich, nuanced set of claims about the social and communicative features that constitute joint media engagement between parents and birth-three-year-old children at home. To be able to achieve this objective, I needed to pay attention to specific analytic units I drew from socio-contextual perspectives on learning and development (Bronfenbrenner, 1977, 1979, 1992; Bronfenbrenner & Crouter, 1983; Bronfenbrenner & Morris, 1998, 2006; Bruner, 1985; Vygotsky, 1978; Wertsch, 1991). The units comprised of contextual features or parameters, that is, the physical and social conditions in which parents interact with young children in their homes. The contextual features, including digital media, the joint mediated activities, and the roles of participating agents (parents and young children) represented the sensitising concepts that helped to label and organise data. The contextual features of the setting are the things I paid attention to in order to inform the object of analysis which is developing a tentative theory about the social and communicative aspects of joint media engagement and how such features may create a potential space for learning. Thus, parent-child dyadic joint actions largely informed by contextual features formed the unit of analysis for this thesis. Keeping in mind the joint actions/activities as the unit of analysis, I went through approximately 16 hours of video data

that I had generated from June-September 2017, in order extract examples of joint media engagement. This iterative process went through four phases, which I describe in the next pages.

The first phase involved watching all the videos to "get a feel for" the data (Erickson, 2007, p. 149). The feel for the data involves keenly watching what is said and done by the interacting persons, "paying close attention to what things look and sound like" (Erickson, 2007, p. 149). So, without making notes or coding anything, I just observed what parents and children were saying and doing initiating the first stage of interactional analysis, where the researcher begins to explore data to obtain a general picture of the generated data (Jordan & Henderson, 1995; Sawyer, 2013). The first pass on my data was to look for all the contextual features of the setting that characterised instances of joint media engagement. My initial plan was to go through the corpus of video data and select ten full video clips for microanalysis. This approach appeared difficult because I did not know where to focus my attention. It was impossible to distinguish episodes of joint media engagement present in the corpus of video data because until now, we do not have a concise definition of joint media engagement. Takeuchi and Stevens (2011) drew on the work of (Stevens & Penuel, 2010) to coin a definition of joint media engagement. However, the definition does not suggest what to look for to be able to say joint media engagement is happening. For this reason, one is unable to conclude that joint media engagement happens by virtue of two or more people using digital media together. I inductively identified key concepts represented in the data to characterise joint media engagement so that when I look through the videos, I can spot instances of joint media engagement. I should note here that as much as I was using an inductive process of data analysis, the background theory I carried into fieldwork afforded guidance. The contextual features of human interaction including the participants, the activities they are doing, their roles in those activities, the place where the interaction is taking place, and the duration of time that the activities and/or interaction takes were the sensitising concepts I drew from socio-contextual theories as a guide for data coding. I defined and discussed these contextual features in the previous chapter. The factors of the social environment in which human beings live are responsible for shaping or limiting the sorts of practices of engagement (Shelton, 2019). However, not all of these contextual features were important in coding instances of joint media engagement. I had to decide which contextual features were useful in the identification of the examples of joint media engagement leading to the second cycle of data analysis.

The entry point to the second cycle of analysis was to foreground some contextual features of the setting to allow for the development of a tentative hypothesis or definition of what constitutes joint media engagement. At this point, the interactional analyst begins to prepare a content log where segments of videos are labelled and given short summaries for easier identification (Sawyer, 2013). Some features of the setting appeared to be less critical in parent-child interactions with digital media. The contextual features of role and activity came strongly into the foreground. The element of activity obviously came through as very helpful because my focus was on who the people were and what they were doing with digital media. There was a strong sense that there was something about the role because the engagement was shared, dyadic and mutual. This cycle of analysis resulted into three sensitising or organising concepts for joint media engagement, namely: a) it was shared, b) it was dyadic, and, c) there was mutual engagement with respect to the activity happening on the screens of the digital media device. In terms of being able to say this is an example of joint media engagement, and this is not, it had to be shared, dyadic and mutual. These three sensitising concepts formed my initial theory of what constitutes joint media engagement. These sensitising concepts became the general patterns and sequence of interaction that I would pay attention to when looking for instances of joint media engagement (Jordan & Henderson, 1995; Sawyer, 2013). Having derived a tentative working theory or definition of joint media engagement in terms of constructs that constitute it, I now had the criteria to return to the video data and code segments for further analysis leading to the third cycle of analysis—identifying instances of joint media engagement.

The entry point to the third cycle of iterative interactional analysis originated with this new unit of analysis initiating a transition from the contextual factors of the setting to the definition of joint media engagement. Instead of looking at the contextual factors, the new hypothesis became the unit of analysis. With the definition of joint media engagement as a new unit of analysis, I could now see joint media engagement happening because I now started to pay attention to ‘what was shared?’, ‘what was dyadic?’ and, ‘what was mutual?’ Sawyer (2013) suggested that the analyst has to look for interactional patterns that repeatedly occur to gain an understanding of how the distribution of sequences of interest occurs in the data corpus. Using this initial hypothesis, I went through the videos and pulled out examples of joint media

engagement that I transcribed verbatim and subjected to theory confirmation in the next cycle of analysis for the sake of analytic generalisation (Yin, 2009, 2014, 2016, 2018).

The fourth and last cycle involved the use the examples of joint media engagement pulled out in the third cycle of analysis to test my emerging theory of joint media engagement in relation to the socio-contextual perspectives of learning. In the processes of reanalysing the identified joint engagement instances to test the theory of what constitutes joint media engagement, it became apparent that my analytic units were inadequate and could not provide enough structure to the emerging theory. For this reason, to expand on my unit of analysis, I had to pull on other theoretical resources that would allow theory confirmation and elaboration. Realising the inadequacy of socio-contextual analytic units, I reverted to cultural-historical theory and found the ingenious work of Genady G. Kravtsov and Elena E. Kravtsova and Donald Winnicott's work on psychoanalysis adequate to foreground role and activity in formulating nuanced claims about joint media engagement. I clarify these cultural-historical and psychoanalytic constructs in the next chapter.

4.10 Reliability and Trustworthiness

Reliability is not just a measure of quality in quantitative research. It is also a top priority for qualitative researchers (Bryman, 2012; Creswell, 2013; Saldaña, 2011; Yin, 2018). Reliability in interaction and conversation analytic methods hinges on the appropriate use of the transcription conventions (Danby et al. 2013; Norris, 2019). I used the transcription conventions developed by Jefferson (2004) to ensure that the findings of my study and its conclusions are as reliable and credible as possible meaning that if another researcher were to re-analyse the video records, the final transcripts would be similar. Norris (2019) argued that by following the established transcription conventions, we ensure that the findings from our studies can be replicated in other locations, hence making such findings reliable.

4.11 Ethics of Researching Young Children's Digital Media Experiences in Families

Ethical principles are an important part of the research process especially when researching young children. Historically, research conducted on children, for example, asked parents to provide accounts of children's experiences as opposed to researching with children themselves by using appropriate methodologies actively seeking their perspectives on matters

that touch on their lives (Dockett & Perry, 2011). Such a view (research *on*) diminishes children's voice in research and constructs them as vulnerable rather than active agents who have a say in issues that concern them including being involved in research as key informants (Dockett & Perry, 2011; Einarsdóttir, 2007; Harcourt & Conroy, 2005). A participatory culture (Jenkins, 2006a, 2012) views young children as full-fledged citizens (Bae, 2009) whose voices of *being* in the world are critical for shaping who they *become* (Clark, 2005; Corsaro, 2005). Ideas about involving children in research and other areas of public discourses evolved from 'children's rights' and sociology of childhood (Bae, 2009; Corsaro, 2005). Researchers are increasingly researching with children to obtain details of young children's engagement with digital media (see e.g., Plowman, 2013; Plowman et al., 2010; Plowman & Stephen, 2013; Plowman et al., 2010a; Plowman et al., 2010b; Plowman, Stevenson, Stephen, & McPake, 2012; Stephen & Plowman, 2014). All these studies demonstrate that children are active meaning makers in the digital age. If it is true that children actively construct their world, then what follows from that is certain rights children have within the research process (Clark, Flewitt, Hammersley, & Robb, 2014; Hedegaard & Fleer, 2008). Children have a right not to have those constructions captured if they do not want to, they have useful things to contribute, and they are key players in joint media engagement; that is, joint media engagement does not exist without them.

Researchers widely acknowledge the need to research human experience in real-life settings where individuals live and do their everyday stuff (van Manen, 1990). I have already stated that qualitative case study provides excellent tools for understanding human experience in situ. One of the most significant epistemological standpoints of qualitative research is the relationship between the knower and what is to be known (Tudge, 2008). From contextual, interpretive and constructionist perspectives, the researcher is recognised as a constituent of the research site and inseparable from the researched. As Tudge (2008) puts it, "When the "objects" of research are human beings, and therefore makers of meaning, the researcher is always present, always exerting an influence." (p. 61). The qualitative researcher investigates human experiences from 'within' which necessarily involves forging a special kind of relationship with the research participants (Marvasti, 2004; Silverman, 2014b, 2017). This intimate relationship that the researcher enters into with those he or she studies brings forth a host of ethical dilemmas the researcher has to be aware of and must be prepared to navigate them in order to

perform ethically sound research (Marvasti, 2004; van den Hoonaard & van den Hoonaard, 2013). Conducting ethical research, "has to do with the nature of the researcher's responsibilities in this relationship, or the things that should or should not be done regarding the people being observed" (Marvasti, 2004, p. 133).

Ethical issues in qualitative research, especially with case studies, often arise during fieldwork, data handling and management, and dissemination of the case study findings (Merriam, 1998), These issues occur because of the nature of qualitative research and the kinds of case study evidence sought by researchers. While seeking evidence in the field, the researcher makes direct contact with research participants. Ethical principles demand that research participants must be protected at all cost particularly those who are least able to protect themselves (Ryen, 2004; van den Hoonaard & van den Hoonaard, 2013). Once the researcher leaves the field, case study evidence which includes the names of research participants, photographs, video records, and interviews among others, must be compiled and communicated in some form (Yin, 2016). The ethical dilemma that arises during this stage is how to communicate the case study findings retaining their contextual conditions but respecting the privacy and confidentiality of the research participants (Merriam, 1988, 1998; Patton, 1990, 2015). The information presented in reports must not contain any leading information that would make it easy to identify the case study research participants (Bryman, 2012).

The primary purpose of carrying out a research endeavour is to produce benefits to the researcher as well as the participants. Because research is a 'best outcomes' endeavour (Alderson, 2014), I was keen to produce positive effects in terms of gaining new insights (Alderson, 2014) into children's use of digital media in selected families in Kenya. These new insights positively contribute to our international understanding of the social and communicative features instantiated in joint media engagement in the global south countries—there was no intention to harm children and families who participated in the study. Furthermore, the study was not an experiment, and no group was exposed to an inferior program or given treatment that might have produced harmful effects to the participants (Bryman, 2012). Observational studies do not carry high risks such as bodily harm and psychological stress associated with biomedical research (Bryman, 2012).

The first ethical step for this project was securing the approval of the Human Research Ethics Committee at Australian Catholic University (see appendix I). Because this project took place in Kenya, it was a requirement that I obtain a research permit from the Ministry of Education (MOE). The MOE had delegated issues related to research co-ordination to the National Commission for Science, Technology and Innovation (NACOSTI). I applied for a research permit and upon obtaining it from NACOSTI (see Appendix II), reported to the Nairobi County Commissioner and County Education office before recruiting families and proceeding with data generation.

The second ethical step was to seek consent of children and families. Informed consent is a standard ethical requirement and embodies autonomy of human beings. Active, informed, and voluntary consent is central to research ethics (Alderson, 2014) when researching with young children (Gray, 2014). Bryman (2012) posits that if researchers intend to research with participants who may not have full capacity to understand the nature of their involvement and that of the study, they must seek informed consent. It is essential for the researcher to ask for children's assent every time the children are engaged in the research (Alderson, 2014) in addition to their caregivers' consent because the caregivers' consent does not necessarily mean the child has agreed to participate (Baines, 2011). However, the issue of consent is quite problematic, especially considering very young children because they do not understand the research protocol (Bryman, 2012). Boellstorff, Nardi, Pearce, and Taylor (2012) suggest that for very young children not capable of giving informed consent, parental consent for participation might be enough. Greig, Taylor, and MacKay (2007) maintain that in cases where children are not capable of giving informed consent, researchers need to seek their assent ensuring children know (if they are capable) they have a choice to participate in the research. They also need to know they have a right to withdraw from the research without giving reasons for doing so and that there will be no negative consequences for their withdrawal (Greig et al., 2007). In this case, the person who is the primary caregiver will be asked to explain all the features of the research to ensure children are not uncertain about what will happen, not only in the short-term during the research process but also in the long-term after the research (Lindsay, 2000).

I obtained written consents from all parents who participated in the study (see Appendix III). I supplied the consent forms together with the information letters and gave parents enough

time to read and understand before they sign. I explained the project. Little did I know that the explanation I had made was more important than signing on a piece of paper to approve participation. Ryen (2004) faced a similar ethical dilemma while researching in sub-Saharan Africa. Ryen (2004) reports that she learned to ask for consent orally and not written signatures. She notes that "For many poor Third World Interviewees, local norms make it difficult to turn down a request from a visitor for interviews or they do not know the potential implications of participating in research" (p. 221). In addition to parents' consent as participants, I obtained their consent to allow their children to participate in my research. Again, asking for oral consent was essential. With three-year-old children, I obtained their *affirmative agreement* before filming sessions. I asked them if they are happy to be video recorded and presented them with a sheet of paper with two faces—happy and sad—to choose from (see appendix IV). On several occasions, I requested that mothers help the children circle the right face on the assent form. The consent-assent argument is an artefact of the dichotomy between the strong and the vulnerable child. Strong children give consent, while vulnerable children give assent. Young children are too small to give consent to research actively, but when they do not want to do something, they make it quite clear. Having been a teacher, I consistently paid attention to children's behaviours and actions such as when they became tired, distracted, lost interest in the activity. I ceased the filming at that moment.

I revealed to the research participants the nature and purpose of my study and indicated to them that participation was purely voluntary. I also informed them that they are at liberty to withdraw from the project, at any point during and after fieldwork, if they felt uncomfortable and did not want to continue participating, without any subsequent negative consequence (Harcourt & Conroy, 2005) (see appendix V). Participation in this context was not limited to the fieldwork phase. It extended until the end of my study, so participants were permitted to withdraw their data after the fieldwork has ended.

Ensuring privacy and confidentiality is a critical ethical practice in research (Alderson, 2014; Flewitt, 2006). Withholding the identity of the participants ensures that families and children are protected. Although the participating families said they had no issue with revealing their names in my research, I thought it would be sound practice to use pseudonyms instead of real names. One parent chose a pseudonym for his child while I chose pseudonyms for the rest

of the children. The future is uncertain, and these issues can come up once families start understanding the issues of identity protection in research projects. Two parents said they would not wish to have their videos and photographs used in publications, but they allowed use in presentations without permitting photographs. The remaining parents allowed me to use the videos and related data in publications. Having reflected on Ryen's (2004) experience and suggestion that research participants in developing countries may not understand the potential implications of taking part in a study, I decided not to use the videos in publications. The two parents who declined to have their videos used had acquired a university degree while the rest had diplomas and secondary education. The video recordings were stored in a password protected computer and only accessible by myself, and my supervisors (Alderson, 2014).

4.12 Conclusion

This chapter presented the methodology used to study joint media engagement in selected in Nairobi County in Kenya. I developed a socio-contextual methodology which I argue is appropriate for studying mediated social and communicative features in 'mediatised life-worlds' (Krotz & Hepp, 2011) taking into consideration the broader cultural and contextual factors (Erstad & Wertsch, 2008). I argued that although videotaping remains a powerful tool for investigating family interpersonal interactions implicating digital media, there are instances where the video camera misses contextual semiotic resources that intervene and alter the interactions between parents and young children. I also suggested that interactional analysis is a suitable analytic approach for inductive analysis of interpersonal interactions in families. In the next chapter, I move from methodological strategies and focus on the empirical materials strategies I have discussed in this chapter allowed me to generate while in the field.

CHAPTER FIVE: FINDINGS

5.1 Introduction

This chapter presents the findings of the study. The chapter describes the social and communicative features instantiated in joint media engagement between parents and children aged birth-to-three years in the context of family interpersonal interaction and communication at home. I will use the term 'young children' to stand for 'children aged birth-to-three years'. This chapter describes my findings, a synthesis and theorisation of the features of joint media engagement, using literature and relevant theoretical resources, will follow in the next chapter.

Before I present a description of the social and communicative features of joint media engagement, I would like to point out that joint media engagement, like any other activity such as 'play', is a social and cultural practice that is rooted in the sociocultural experiences of everyday life of families. In other words, joint media engagement occurs in the context of the conduct of everyday life (Kristensen & Schraube, 2014), because, in mediatised life-worlds, digital media practices are part and parcel of how we construct social reality in our day-to-day lives (Couldry & Hepp, 2017). Therefore, joint media engagement may be viewed and researched as the "experiences and actions" of parents and children "within the social and material contexts of their everyday lives" (Kristensen & Schraube, 2014, p. 291). In my analysis of two-person interpersonal interaction and communication involving digital media, I identified two salient features that were in evidence in joint media engagement. These features were: (i) mediated concrete ongoing embodied activities and actions, and, (ii) distinct role-relations between participants (intersubjective positioning). The ongoing embodied activities and actions and the positioning of participants in joint media engagement do not occur in a vacuum. They occur in the interpersonal interactions and communication that characterise the conduct of everyday experiences of young children in their families.

In the first section of the chapter, I highlight the concrete embodied activities, that is, the things that parents and young children were *actually doing* with their bodies, the diverse social partners in joint media engagement, and the roles the respective social partners assumed while using digital media at home. Most, if not all, of the activities that I outline in this thesis, are identified in the literature. There is nothing new about these activities, and that is the reason I do

not wish to discuss them in detail here. Other researchers have provided thorough accounts of digital media activities in different settings such as homes and preschools (Plowman, 2013; Plowman & McPake, 2013; Plowman et al., 2010; Plowman & Stephen, 2013; Plowman et al., 2010a; Plowman et al., 2010b). Rather, I will (in section two) add a new dimension to the existing literature by way of describing the social and communicative features that constitute joint media engagement. I also describe in the first section of the chapter, the problem that arose in my fieldwork regarding the concept of joint media engagement. The findings I am going to present address the following research questions:

1. What are the social and communicative features that are instantiated in joint media engagement between parents and children aged birth-to-three years at home?
2. What is the role played by digital media and associated texts in the social and communicative features of joint media engagement?
3. What do the social and communicative features of joint media engagement potentially tell us about the forms of learning that might occur in joint media engagement?

I should note that the way the chapter is organised, the headings do not directly match the questions. For instance, the first heading of the chapter talks about embodied activities of joint media engagement in families. I do not have a question for this heading. My main question for this thesis was about social and communicative features available in joint media engagement. However, it would be impossible for me to identify the social and communicative features without paying attention to what parents and children were *actually doing* with digital media. Parents and young children were engaged in concrete activities while using digital media together, and it was only by examining the activities and actions that I was able to identify the social and communicative aspects. The discussion relating to the second question about the role of digital media and related texts in joint media engagement is not represented by a corresponding heading. However, note that throughout the thesis, I have treated digital media as cultural tools or mediational means. So, when, for example, I talk about embodied activities, digital media are already implicated in those activities. I am not discussing social and communicative aspects independent of digital media; rather, I have argued that digital media are

mediating or affording those aspects. The third question—an extension of the first two questions to help me understand more about joint media engagement and set me on a path toward the theorisation of joint media engagement presented in chapter six. The headings in chapter six also do not match this question. The headings outline theoretical concepts that theorise the social and communicative features of joint media engagement. All will be clarified throughout the two chapters.

5.2 Embodied Joint Media Engagement Activities in Family Interactions

The findings of the case study show that there are varied joint media engagement activities enmeshed in the everyday lives of families, especially during typical parent-child dyadic interactions. In all the eight families I observed, parents and young children interactively engaged in diverse joint media engagement activities that characterised their everyday digital media engagement lived experiences. Joint media engagement activities included taking photographs, viewing photographs saved in smartphone galleries, and watching YouTube videos (e.g., Peppa Pig, YaYa and Zouk, and Angry Birds). Also, parents and young children listened to nursery rhymes and recorded music, played games (e.g., Temple Run, Candy Crush, Car Race Games), and Card Games (e.g., Solitaire), and made phone calls to extended family members living in other parts of the country.

The social organisation of joint media engagement activities varied from one family to another in terms of the social partners who jointly used digital media with the focal children, primarily because of the dynamic and complex nature of families' lived realities. On many occasions, joint media engagement activities comprised parent-child-parent triads with both the father and mother interacting with the focal child. However, in most cases, one parent was in 'close proximity' with the focus child (focal dyad) so that both the child and the parent attended to digital media on the screen of the digital media device, while the other parent, though in the same room (space), occasionally commented on or gave instructions from a distance about what was going on in the focal dyadic interaction. There were also parent-child[ren] interactions involving siblings and sometimes children from the neighbouring houses, as well as child-child[ren] interactions that comprised of the focal child using digital media together with siblings or friends from the neighbourhood or both. Even though joint media engagement in homes involved other members of the family and other children from the neighbourhood, my

goal was to observe and make sense of parent-child dyads of joint media engagement involving the focus child and either the mother or the father.

Within the embodied activities of joint media engagement, parents and children positioned themselves differently. In terms of roles or 'intersubjective positioning' (a topic that I will return to in the next chapter), parents took a more dominant role by guiding, giving suggestions, managing children's behaviour and other related strategies that were used to mediate young children's digital media experiences. Researchers such as Plowman and Stephen (2013), Burnett and Merchant (2018) and Marsh et al. (2015) identify these 'quasi-pedagogical' practices. The concept of 'playful pedagogies' used by Burnett and Merchant (2018) is particularly useful in examining the social and communicative aspects around the use of digital media by young children in their families. The dominant role displayed by parents in joint media engagement does not mean that young children remained passive throughout the activities. Young children showed notable agency in joint media engagement. They were actively engaged in shaping and organising their experiences of digital media activities based on their prior experiences, interests and evolving abilities such as language and fine motor skills. Together, the diverse, embodied joint media engagement activities listed above combined with the distinct intersubjective positions of the interlocutors (parents and young children), tell us what joint media engagement looks like in homes with young children in one of the largest unplanned settlements and other suburbs in Nairobi County, Kenya. I argue that these embodied activities and intersubjective positions are the things to look for in the real world when studying joint media engagement in families with young children.

It is impossible to report qualitatively all the joint media engagement activities and the diversity of the social partners that were involved, for two reasons. First, I did not obtain informed consents from those captured on video other than the focal children and their parents. For this reason, I did not report on data obtained from those who appeared in the video but did not give consent. Second, the thesis strictly sought to understand the *social* and *communicative featuress* of dyadic joint media engagement with an objective of understanding 'the forms of learning' that may be "*already* instantiated within the use of these media" (Duncan & Hayes, 2012, p. 3). As such, reporting in this thesis confines itself to joint media engagement between parents and young children in their respective homes.

I have italicised the words ‘social and communicative features’ for a reason. In the introductory section of this chapter, I mentioned that I would describe a problem that immediately arose in fieldwork and coding of data. From the beginning, I wanted to study dyadic joint media engagement involving each of the focus children together with either their father or mother. Even though I had a clear focus on parent-child dyads when using digital media, the concept of ‘joint media engagement’ itself was, at the time I started the fieldwork, not well theorised. Its definition and explanation provided “viewing, playing, searching, reading, collaborating and creating” as modes of joint media engagement (Takeuchi & Stevens, 2011, p. 9). The concept did not provide researchers with robust advice about what to look for in the real world to be able to say whether and how joint media engagement is taking place. I had to look for ways to *operationalise* the concept of joint media engagement, a process that was painstaking and time-consuming. As the fieldwork progressed, I realised that the theory I was using was also inadequate because it did not offer me enough suitable analytic units with only two contextual factors of the ecological setting, that is, the elements of ‘activity’ and ‘role’ (Bronfenbrenner, 1977). In the end, I had to identify the social and communicative features to allow me to operationalise and theorise the concept of joint media engagement. I will elaborate on each of these in the remainder of this chapter and the following chapter. First, let me begin by presenting my claims about the social and communicative features supported by digital media in parent-child interactions and communication.

5.3 Social and Communicative Features Instantiated in Joint Media Engagement Activities

My first aim was identifying the social and communicative features that characterise the joint media engagement activities that took place when parents jointly used digital media with their young children. Through repeated watching, thinking, and tagging the activities in terms of ‘what was going on’ in the parent-child dyadic digital media engagement interactional processes, I noticed four interrelated social and communicative features concluding that together these constitute embodied joint media engagement activities. These were:

1. Physical proximity between parents and young children,
2. Reciprocal communication between parents and young children,
3. Mutual visual gaze to digital media activities on the screen, and,

4. Sharing a common interest in digital media activities suited to joint engagement.

According to my microanalysis and interpretation of the interpersonal interactional processes ensuing when parents used digital media collaboratively with young children, these four interrelated social and communicative features served to organise the experience of joint media engagement of parents and young children in homes. The question as to whether these social and communicative features may produce positive or negative developmental outcomes in terms of children's social and psychological well-being is beyond the scope of this thesis and will likely require the use of longitudinal methodologies to test their consequences on young children's psychological adjustment. However, based on what is known about 'shared book reading' (DeLoache & DeMendoza, 1987; Ninio & Bruner, 1978; Rossmanith, Costall, Reichelt, López, & Reddy, 2014) 'joint involvement episodes'(Schaffer, 1989, 1992), 'joint attention'(Bruner, 1995), and 'joint engagement' with normal and autistic children (Hobson & Hobson, 2011), I am able to make some conjectures about positive developmental outcomes that may be derived from joint media engagement.

In contributing to the research community, the first task of analysis was understanding what joint media engagement with young children looks like in the context of home settings before asking questions about the developmental outcomes that arise from it. The social and communicative features of joint media engagement I have outlined are of interest because they do not focus on the *content* of digital media. Instead, the four social and communicative features of joint media engagement exemplify the affective, embodied, cultural, and social aspects of family interpersonal relationships with young children, which typify the process of socialisation constantly alerting us to how digital media infiltrate into the normal routines of everyday lives of the families, especially around socialisation of young children.

In the section that follows, I present each of the four social and communicative features constituting joint media engagement activities one at a time, using commentary from my fieldwork and examples of dialogue between parents and children. As will be evident in the examples of data used for illustration, not all instances of joint media engagement include all the four social and communicative features I identified. I have labelled some cases of joint media engagement as negative cases. A negative case is an incident that appears to contradict the general pattern (Corbin & Strauss, 2015) of joint media engagement because it does not show all

of the four social and communicative features constituting embodied joint media engagement activities. Such cases may, for example, contain one of the social and communicative features and lack three or may contain three social and communicative features and miss on one. In this thesis, negative cases of joint media engagement though not considered good examples, have value as they highlight the coherence of examples where all four social and communicative features are present particularly evident in the communication exchange category, where a parent makes an effort to stimulate the child to talk, but the child does not make any noticeable response. Similarly, I observed negative cases where children and parents showed interest in different digital media engagement activities. The description of negative cases, therefore, serves to strengthen the explanation of the general cases. I will advance an argument that, for a researcher to claim evidence of joint media engagement, he or she should be able to identify some of these social and communicative features as taking place. The examples of the social and communicative features present in the form of vignettes and in some cases extracts without the prescribed conventions. I transcribed the episodes of joint media engagement into transcript extracts following the transcription conventions (see appendix VI as an example). I did not want to present my findings in the form of extracts containing transcription conventions. I wanted to create little stories of parents and children engaged in joint media engagement. So, the movement from raw data to vignettes began with extract transcription and developed into creating little stories from the transcripts. Let me start with the first social and communicative feature.

5.3.1 Physical proximity between parents and young children.

My first claim is that for embodied joint media engagement activities to happen in homes; there must be close physical encounters between the children and their parents. By repeatedly viewing and interpreting what was going on in joint media engagement instances, I noticed the importance of physical body closeness in facilitating joint media engagement activities with actual bodily contact characterising the physical closeness between parents and young children. In all eight participating families, I observed close body-to-body contact between young children and parents while using digital media together. Physical body-to-body encounters involved other physical actions such as touching, moving, repositioning bodies and pulling bodies. There were clear indications that for an incidence to be part of the activity component of joint media engagement among children under three years, in the context of

family interpersonal interactions, there ought to be close physical encounters between the child and a family member (in the case of this thesis, the parent). Thus, digital media engagement activities must reflect an ability to draw parents and young children together to facilitate interpersonal interaction and communication. This finding supports an early study that examined the social use of television in families as interpersonal systems (Leichter et al., 1985). In this study, Leichter et al. (1985) found that television had the ability to draw individuals together. An example to illustrate physical proximity in joint media engagement is Andrew's case.

Vignette I

> It is a Thursday evening. The time is 7 pm. Andrew's father has just arrived from work. His mother arrived an hour earlier, and she is involved in the kitchen preparing dinner for Andrew and the family. Andrew is sitting on the couch, playing with his father's smartphone. The phone slips through his fingers and falls on the floor. He picks it up and discovers the screen has locked. He tries to unlock it by inserting the passcode without success. His mother enters the living room from the kitchen and sits on the couch next to where the father is sitting. Andrew goes to his father and hands him the phone as he vocalises. His father establishes eye contact and asks him, "What do you want?" Andrew vocalises. His father inserts the passcode and taps on an app while asking him what he wants to do with the phone. Andrew continues to vocalise in response to his father's questions as he climbs on the couch's arm and leans on the father's lap. The app opens, showing large letters, and the father hands the phone back to Andrew. Andrew starts stroking the letters and realises his father is distracted talking to a visitor, so he resourcefully calls out 'mum', makes a turn and goes to her. His mother is ready to give him a hand in playing the letter app. Andrew stands in front of her, all his attention on the screen. "Let me help you out', she says as she pulls Andrew to move closer to her. She repositions herself so that she can clearly see what Andrew is looking at on the screen. The letter app closes. "Oh, you have closed the game", she says. She helps Andrew open the app. She leans in closely to Andrew's body, takes hold of his hand and helps him to trace a letter. Even though the father is saying "don't hold his fingers, don't hold his fingers", her impulse is to help Andrew accomplish the activity he is doing so

she ignores the father's call and holds Andrew's finger to help guide him to trace the letters.

The above vignette contains many actions comprising my definition of joint media engagement activity, with physical contact being the outstanding one. Andrew's case is a good example of how physical proximity is an essential social and communicative practice observed in joint media engagement activities between parents and young children. The close body encounter between the mother and her son gives joint media engagement an embodied character. The mother being close to Andrew, in this case, may serve two purposes. On the one hand she wants to extend Andrew's efforts to make sense of what they are jointly doing on the screen, that is, understanding the world around them; while, on the other hand, joint media engagement activities make it possible for the mother to have a close affective interaction with her son, Andrew. The skin-to-skin contact affords the mother to have a clear line of sight of the activity on the screen of the digital media device. This social and communicative practice of physical proximity or, to borrow Scollon's (1998) terminology of 'ecological proximity' is analogous to Goffman's (1963) 'physical co-presence'. On physical co-presence, Goffman (1963) suggests that: "persons must sense that they are close enough to be perceived in whatever they are doing, including their experiencing of others, and close enough to be perceived in this sensing of being perceived" (p. 17). Research findings from previous studies suggested that the mere presence of a social partner when young children are using digital media has a social facilitation effect and may alter the learning experience of children (Krcmar & Cingel, 2014).

So, we may ask the question, what kind of interaction is joint media engagement? Moreover, from the standpoint of mediation—a sociocultural concept (Scollon, 1998; Wertsch, 1991, 1994), what sort of mediated action or activity is going on in joint media engagement? I argue that there are two actions foregrounded in Vignette I. First, I argue that the action or activity going on in the interpersonal interaction of Andrew and his mother is being together and having the warm embodied interactions of a mother and a son. Digital media in this context becomes a cultural tool or mediational means recruited by the social actors to make possible the conventional practice of sitting together and having embodied affective interaction and communication. Digital media in this context affords embodied interaction between the mother and the son (Gibson, 1979; Hutchby, 2001). Even in the absence of digital media, close affective

interactions between parents and young children are known to create secure relationships through which young children learn and develop (Bronfenbrenner, 1977, 1993; Bronfenbrenner & Morris, 2006; Fleer, 2008; Hedegaard, 2009; Hedegaard & Fleer, 2008). Young children learn from relationships with adults who care about their wellbeing. Research about digital media, especially research on television exposure in childhood, shows that screen media negatively affects parent-child relationships, particularly the warm affective interactions that are necessary for healthy development. For example, commenting on the effects of television on young children's psychological functioning, Bronfenbrenner (1974) noted that,

> [t]he television set casts its magic spell, freezing speech and action and turning the living into silent statues so long as the enchantment lasts. The primary danger of the television screen lies not so much in the behavior it produces as the behavior it prevents-the talks, the games, the family festivities and arguments through which much of the child's learning takes place, and his character is formed. (p. 170)

In the quote, Bronfenbrenner (1974) acknowledges that television has the potential to constrain family activities. Cultural tools such as television and other digital media devices affords some activities while constraining others (Erstad & Wertsch, 2008; Gibson, 1979; Hutchby, 2001; Wertsch, 1991, 1994). For Bronfenbrenner (1974) television influences children's development by interrupting the typical parent-child interactions through which children develop concepts such as self-regulation. I suggest the same reasoning about television's influence on the learning and character formation of young children applies to digital media. However, the television and other related digital media studies I have referred to in chapter two have not considered the possibilities of *extending* child-parent relationships and communicative features (Daniels, 2017) and, in turn, supporting children's learning by encouraging joint media engagement. The second activity that is going on is the social practice of reading and writing. Traditionally associated with books, pencils or crayons, reading and writing scenario in Vignette I, illustrates digital media as a cultural tool mediating the act of reading and writing—it makes the actions of reading and writing possible. I argue that digital media are the new cultural forms of childhood that may support reading and writing in the same way traditional media such as books have done for many years.

Pauline's case was similar to Andrew's experience of joint media engagement. Pauline watched the Angry Birds show saved on her mother's laptop. She watched the show together with her mother at the family's cybercafé. The cybercafé was approximately one kilometre away from the family house. Pauline's interaction with her mother while watching the Angry Birds show supports my claim that close bodily contact may be important in defining joint media engagement activities with young children.

Vignette II

> Pauline is sitting at a raised counter on a tall stool. In front of her on the counter is a laptop computer. Her mother stands beside her as she guides her to locate and open a folder containing the Angry Birds show on the laptop computer. The folder containing the show is named Pauline suggesting that she uses the laptop, and all her favourite shows are kept in her folder. There is close shoulder-to-shoulder contact between them. The mother tells Pauline to double click on the show, and she does so. The show begins to play, and Pauline adjusts herself on the stool. Her mother leans forward to establish eye contact and asks her "do you like the show?" Pauline nods in agreement as the mother repositions her body by leaning forward, rests her elbow on the counter so that she has a clear view of what is happening on the screen, and at the same time to be able to have good eye contact with Pauline. She asks Pauline to "tell the teacher (researcher) the name of the show she is watching". "What are you watching?" I ask Pauline. "Angry Birds", she replies. The mother gets behind Pauline, supports herself on the stool Pauline is sitting on so that her head is over Pauline's shoulders. She continues engaging Pauline with questions about the show. On many occasions, Pauline establishes eye contact while responding to her mother's questions.

Although this is the only case in which a parent and a child jointly used digital media outside of the family home, it still indicates that close physical proximity is crucial for supporting joint media engagement activities with young children, regardless of the setting in which it happens. Despite being outside the family home, Vignette II maintains the tendency for establishing an embodied close skin-to-skin affective encounter, similar to the cases that occurred in family homes. Pauline's experience provides a good case to support one of the major claims advanced in previous research about joint media engagement, which suggest that

joint media engagement can happen anywhere and at any time (Stevens & Penuel, 2010; Takeuchi & Stevens, 2011), provided that proximal body-to-body interaction is established and maintained. The idea of joint media engagement happening 'anywhere at any time' applies mostly to portable digital media technologies carried by families to different settings. Young children are increasingly using digital media in diverse settings, some of which may be outside the family home.

For this reason, it may be important to encourage and support joint media engagement experiences any time young children encounter digital media. Again, the same questions I asked in the previous scene suit here, namely, what kind of interaction is this? Moreover, which action or activity is being mediated? In addition to sitting together and having an embodied affective interaction as we saw in the previous example, Pauline and her mother have a conversation. Digital media is just an enabler of the conversation they are having. In other words, digital media provides the content or acts as a topic for the conversation (Scollon, 1998). Most conventional social and communicative features are in some important respects supported or enabled by cultural artefacts (Scollon, 1998; Wertsch, 1991, 1994). Digital media viewed this way, that is, as a mediational means, can be used to amplify children's communicative repertoires (Daniels, 2017) as seen in the above vignette where the interlocutors use digital media as a topic to sustain the conversation (Scollon, 1998). In the conversation between Pauline and her mother that draws its content on digital media, there are some indications of playful pedagogies happening (Burnett & Merchant, 2018), a topic that I will return to in the discussion chapter.

Physical proximity seemed more important for younger children than older children. Lavender's experience provides a good illustration here. Lavender was the youngest of the eight children who participated in this study. She was one year and eleven months old at the time I started observing her in her home. Lavender's experience of joint media engagement activities while sitting on her mother's lap may suggest that physical body closeness is even more important for infants.

Vignette III

> Lavender's mother is sitting on the couch, holding Lavender on her lap. Lavender is stroking and swiping the screen of her mother's smartphone as her mother watches keenly. She looks up to the researcher's camera, then establishes eye contact with her mother briefly before she turns her eyes to the camera again. She shifts her eyes back on to the phone's screen—she continues to swipe and tap. The mother is leaning forward in such a manner that her head is over Lavender's shoulder so that she can see the activity happening on the screen. Lavender continues to swipe and tap on the photographs. She taps on a recorded video—it starts to play. She establishes eye contact with her mother in a way suggesting she is seeking approval.

We may learn several things from Lavender's experience of joint media engagement with her mother, some already seen in the previous vignettes involving Andrew and Pauline working jointly with digital media together with their mothers. We learn that the physical closeness of the interactants allows the parents to see what is happening on the screen so that they can monitor, regulate and focus children's attention on critical aspects of the activities they are doing on the screen. This finding resonates with claims made in earlier studies suggesting that specific arrangements of individuals in a physical space while using digital technologies are more suited for certain activities and not others (Leichter et al., 1985). Another thing we may learn is about the kind of activities that parents allow children to do on their phones. Lavender was very comfortable while viewing the photographs but, immediately she tapped on the video, she looked into her mother's eyes to check her mother's facial reaction. Her mother smiled, and she looked back to the screen and watched the video. I interpreted this as meaning that the mother's smile suggested to Lavender that her mother approves the activity and so Lavender watched the video.

This claim about physical proximity of parents and young children is interesting because it may suggest a noteworthy variable regarding parents' sensitivity to maintaining personal contact with young children. Physical proximity with young children when they are using digital media may be important for reassuring children that their parents value what they are doing. Joint media engagement activities can be more fun for young children when an adult is close to them and is paying attention to, and actively participating in the activities. Possibly the

proximity conveys a message to young children that the adults are interested in the activities. For this reason, children tend to both hold their concentration on the activity at the time and return to it later, either alone or with another social partner (Bronfenbrenner, 1979). Young children need to feel secure when engaging with digital media activities and require the physical availability of a trusted and supportive adult for that purpose. Close physical body encounters were made possible by the fact that, in all families participating in the study, parents and young children jointly used portable and highly mobile digital media — parents' smartphones, tablets, and laptop computers, with the exception of Pauline who played a Card Game with her mother on a desktop computer. The bodily closeness could have been different if parents and young children engaged with fixed digital media such as televisions. Similar to the other vignettes presented above, digital media as a cultural tool affords an opportunity for Lavender and her mother to sit and experience embodied skin-to-skin interactions, using digital media as referents for the ongoing interaction.

So far, I have claimed that close physical proximity between parents and young children is an essential social and communicative practice for joint media engagement to occur. However, does body-to-body contact mean that meaningful engagement is taking place? The term 'meaningful' in the context of joint media engagement implies that the social partners focus on a particular aspect of an activity in a way that suggests they are having a common understanding of the joint activity. Meaningful engagement implies that interlocutors who are co-present in the same space are engaged in 'focused interaction' (Goffman, 1971). The reason for this is that social actors may be co-located in the same physical space without engaging socially with one another. Smartphones, tablets, laptop computers and other digital resources technologically mediate the lived experience of families considering that the life-worlds we inhabit are mediatised (Couldry, 2012; Couldry & Hepp, 2017; Krotz & Hepp, 2011). Therefore, we can assume that something is going on with digital media that is mediating the parent-child dyadic interaction. However, two people can have close embodied interpersonal interaction that is mediated by an object, but still, they may not be doing something jointly that is meaningful to both. They could be focusing on different aspects of the activity. For an observer of an interaction to be sure that the social actors are socially engaging one another, there must be other social and communicative actions or clues—what Goffman (1971) refers to as 'tie-signs' which indicate they are in a 'focused interaction'. Therefore, even though physical proximity

has been found to be an essential social and communicative practice of joint media engagement for young children, on its own, it is an insufficient indicator for determining whether meaningful joint media engagement activity is happening or not. For this reason, I next outline another social and communicative practice that indicates to us that the parent and the child engage with one another and that they construct meaning out of joint media engagement experience. In addition to physical proximity, I argue that reciprocal communication between the interacting parties is a crucial social and communicative practice for organising and structuring joint media engagement activities.

5.3.2 Reciprocal communication between parents and young children.

My second claim is that bidirectional communication was established as an important organisational social and communicative practice for joint media engagement. The establishment and sustenance of embodied joint media engagement activities required "richness of information flow and facilitation of feedback" (Goffman, 1963, p. 17) utilising both verbal and non-verbal interpersonal communication cues—that indicated to one another the shared experience of joint media engagement reflecting some aspects of intersubjectivity (Hobson & Hobson, 2011; Vygotsky, 1978) that is present in joint media engagement. I will talk about intersubjective experiences in the next chapter. Active reciprocal communication exchanges characterised the embodied joint media engagement activities in seven out of eight parent-child dyads that participated in this study. Verbal language and other non-verbal communication cues served as interactional tools to enrich the embodied joint media engagement activities between the parents and young children. Young children and parents in all the families but one, which is treated as a negative case as far as language use in joint media engagement is concerned, engaged in short but reciprocal communication exchanges around shared topics. That is, the communication exchanges were about joint media engagement activities they engaged with on the screens of digital media technologies. I noticed that communication cues, whether verbal or non-verbal, were powerful enablers of parent-child interactions during joint media engagement. This finding may suggest that social participants in the experience of joint media engagement must find ways of communicating their ideas to each other because joint media engagement is an experience-sharing enterprise. It is through communicating and sharing of experiences while using digital media that social reality is constructed (Couldry, 2012; Couldry & Hepp, 2017). This finding is especially useful in parent-child interactions during infancy and toddlerhood

when parents are actively modelling language to children. Children at this stage of development understand much of everyday spoken speech but may still speak few words, and some are still using vocalisations in the form of noises. Using digital media to support the flow of information and feedback between parents and young children may be crucial for identifying and expanding young children's communicative actions that are necessary in the digital age (Burnett & Merchant, 2018; Daniels, 2017; Merchant, 2015). Andrew's experience in joint media engagement activity with his mother is a good illustration of reciprocal communication flow. Andrew was playing a letter app together with his mother:

Extract I

Mother: Drop! Start from up here [points to the screen where Andrew should start tracing the letter from].

Andrew: Vocalises.

Mother: Up here. Start from here [points on the screen with her index finger]. Draw like this [demonstrates on the screen with her index finger]. Do not start from the bottom.

Andrew: Eeh

Mother: Like the way this finger is drawing [points to the moving finger on the screen].

Andrew was developing oral language. He had few words, and vocalisations that I assume only his parents understood. His early words and vocalisations appeared to influence the back-and-forth conversational turns with his mother. The level of Andrew's spoken language had a bearing on the quality of communication exchanges involved in joint media engagement activities. The level of language exchange and subsequent joint media engagement activity appear to change significantly when an older child with more established oral language is involved. Pauline's case provides an excellent example. She watched the Angry Birds show together with her mother:

Extract II

Mother: What do you see?

Pauline: Fish.

Mother: Which one do you like?

Pauline: Aaaaaaaah... [Gazing her eyes on the screen].

Mother: The big one?

Pauline: No.

Mother: Ah!

Pauline: The small one.

Mother: Aha! [Nodding].

Pauline: This one! [Points to the screen].

Mother: Oh...that one. Who will eat the fish? Show me the small fish.

Pauline: Small fish? [Streches her hand and points the small fish on the screen]. I like showers [repeats what has been said in the show].

Mother: What is it saying?

Pauline: I like showers [repeats].

Mother: Look at your angry bird; what is it doing?

Pauline: Swimming.

Mother: Swimming in the water?

Pauline: No! Swimming outside [gestures on the screen].

Mother: Outside the water?

Pauline: [Stands to explain]. Outside! There is no water here. This is the hole for this one [pointing on the screen].

As evident in the above extract, Pauline's joint media engagement with her mother contains many conversational turns compared to Andrew's case. I argue that this is because Pauline is older with more advanced language. Although it is important to recognise that Andrew, though younger, was involved in a more challenging joint media engagement activity, Pauline's advanced oral language demanded less effort from her mother to establish and sustain the interaction in joint media engagement. The interaction that unfolded in their joint media engagement activity seemed to me to be natural, like that of adults holding a conversation on a given topic.

Either party could initiate the communication exchanges between parents and young children and the initiator of the conversation had to wait for the response from the other party, although parents probed more either to rephrase questions so that the children understood them or to elicit more responses from their children. The language exchange in the above extract contains many questions from Pauline's mother. Generally, parents provided more verbalisations concerning goal direction, monitoring, and controlling children's actions and behaviours. Reciprocity in communication indicated the child's and the parent's awareness of each other's participation in the activities. As is evident in the above extracts, these communication exchanges comprised verbal and non-verbal signals.

The communication cues initiated by an interacting partner prompted a response or an action from the other, either in verbal or non-verbal form. Non-verbal cues from parents and young children included gazing, eye contact, pointing, touching, stroking, nodding and the like. The non-verbal communication cues appeared to be significant, yet they are seldom the focus of researchers' interest in the dyadic analysis of digital media use. Verbal communication from children comprised of intelligible sentences, random words and sometimes vocalisations. Older children, as in the case of Pauline who was three years old, used intelligible sentences and, as it is evident in her extract, the joint media engagement activity of watching her Angry Birds show is richer and has a greater number of conversational turns. In contrast, Andrew's experience of engagement in joint media activity is shorter and less detailed, characterised by fewer conversational turns and much greater effort was required from his mother to sustain the interaction. However, parents who are skilled and sensitive to their children's needs can use non-verbal communication cues from children to make joint media engagement activities

successful. Andrew's case, even though characterised by short language exchanges (mostly vocalisations from him), does not imply that the joint media engagement activity was not successful. It simply means that similar to any other everyday parent-child interactions that vary with the child's age and level of cognitive development, observed variations are likely in cases of joint media engagement activities.

I have presented two examples of children: one with emerging oral language and vocalisations and the other with more advanced language. What happens if the child is not responsive to the parent, as in Brian's case? Brian was two years and two months old at the time I started my fieldwork. He used an Android powered tablet with his mother in the only home connected to the internet out of the eight homes that formed the sample for this thesis (noting that Pauline's family cybercafé, a business establishment, also had an internet connection). By internet connection, I mean homes that have access to the internet via fibre network technology, while acknowledging that many households in Kenya have access to mobile internet (Stork, Calandro, & Gillwald, 2013). Brian and his mother watched Peppa Pig on YouTube. His mother tried to stimulate him to talk about what they were viewing, but her efforts did not yield much success. Brian was unresponsive to his mother on this occasion. The following vignette captures the joint media engagement activity as it happened on the couch in their house.

Vignette IV

> Brian and his mother are sitting on the couch. Brian's mother asks him what he would like to watch on YouTube. Brian gazes on the tablet's screen without talking. His mother taps on the YouTube app. It opens. She scrolls down and selects a Peppa Pig video show. She taps on it, and it starts to play. "Let us watch Peppa Pig", she tells Brian in an intonated voice. She points on the screen and asks, "Brian, what is this? What is this?" Brian's eyes are fixed on the screen, and he does not attempt to respond. His mother calls out his name in an intonated voice, "Briaaan". He makes eye contact with his mother. She points to the screen and asks again, "What is this? Brian!" Brian continues to gaze on the screen following the Peppa Pig characters and does not respond to his mother efforts to have him talk to her. It is not immediately clear if he is so engrossed in watching the show or he is deliberately ignoring his mother's attempts to have him talk about the show.

This example suggests the role of language or other kinds of communicative acts in joint media engagement. The mother's communication input must combine with the child's in order to have joint media engagement. The child's communicative acts are supposed to serve as a stimulus for reinforcing the mother's increased engagement in joint media engagement, and vice versa, but this aspect is missing in the above instance. Generally, Brian exhibited fewer social behaviours, including language, potentially acting as stimuli for the mother's increased engagement in the shared experience of appropriating digital media in the interaction. The result was a low level of mutual stimulation in their dyadic interpersonal interaction and communication in joint media engagement activities. The example presented in the above vignette points to something interesting—that joint media engagement activities are more structured when rich reciprocal communication exchanges are made, enabling greater conversational turns between the child and the social partner. The structure and organisation of joint media engagement activities may appear to rise with children's increase not only in their chronological age but also in their language development or mastery. This finding illustrates an important point that is pervasive in socio-contextual paradigms of learning, namely that the richness of sociocultural activities varies according to the characteristics of the social partners (Bronfenbrenner & Morris, 2006; Tudge & Hogan, 2005; Vygotsky, 1978). For instance, Bronfenbrenner and Morris (2006) posit that young children bring organismic characteristics into interactive situations that determine their level of engagement in sociocultural activities and how adults respond to them. Language is the most important cultural 'tool of tools' that children bring into an interactive relationship with other social partners (Vygotsky, 1978) in joint media engagement activities. Thus, the complexity of joint media engagement activities increases with the increase in children's mastery of language, which makes interpersonal interactions while using digital media richer with a greater number of conversational turns.

A second interesting point raised a question about Brian's level of participation in joint media engagement activities in the home context noting that Brian's responsiveness improved while using digital media jointly with a sibling in preference to his mother. In a separate instance of joint media engagement, differing from the one represented by the preceding vignette, the joint media engagement experience changed when Isabella, Brian's sister, joined in. The joint media engagement shifted from Brian and his mother to Brian and his sister Isabella. Isabella was almost five years old when I started observing this family. She was about

to celebrate her fifth birthday in a couple of weeks. She was very interested in participating in this project to the extent that she signed the consent form. Isabella's mother insisted that I observe her use of digital media together with Isabella because they would do interesting activities. I declined the mother's invitation and explained to her that my research focus was limited to under threes. However, Isabella's consent to participate allowed me to document her interactions with Brian. One resulting joint media engagement experience occurred as follows:

Vignette V

> Brian is lying on the couch, watching a show on his mother's tablet. The tablet is placed on the couch in front of him. He is lying on his stomach with his head up. His mother comes and leans over him, supports her elbow on the couch and rests her cheek on her hand. "Brian, what colours are those? Do you know colours? Eh! Brian, what colour is that?" Brian vocalises and rolls over. He takes his eye gaze off the tablet's screen. The mother's response to his vocalisation suggests it was not related to the questions she asked him. Isabella, Brian's sister, joins them and asks if she can watch the show with them. The mother asks me whether it is okay for her to join in, and I respond in the affirmative. Isabella lies on the couch next to the tablet, and Brian returns to his position, so they can watch together. "Are you going to teach him colours? What colour is that?" the mother asks Isabella. "Kadoshe (Brian's nickname) these are colours", Isabella tells Brian as she laughs. "Red", she continues. Brian vocalises. "Yellow", Brian vocalises. "Orange", Brian vocalises. Isabella looks up at her mother, and the mother tells her to continue teaching him. She says, "you can change and teach him something else." Isabella interjects, "Me! I am a teacher." Her mother continues, "Yes, maybe numbers. Look for one with numbers. He is responding better to you."

I have stated that my focus was on parent-child dyads while using digital media together. When Brian's mother asked me if she could allow Isabella to join in, I agreed and contemplated ending the recording. Nevertheless, I decided to continue recording with the idea that I would discard the material. I realised later that the recorded episode could illustrate some of my claims. I have used the dyad of Brian and his mother as a negative case, where there is no elaborate reciprocal communicative exchange between them; Brian's mother had tried to stimulate him to talk about the Peppa Pig show, but her attempts did not yield the anticipated outcome. Isabella

then engaged Brian in joint media engagement activity of reading colours. The sibling-to-sibling dyad, that is, Brian and his sister Isabella worked very well, pointing to a thought-provoking idea that joint media engagement activities may not be effective between parents and young children, but such activities may be rich when they occur among siblings. As shown in the above vignette, although Brian did not respond to his mother, he responded well to his sister.

Let me return briefly to the dyadic interaction of Brian and his mother. Can we claim that there is absolutely no interaction going on? I do not think that is the case. There are two forms of social interaction going on. The first one is about reading digital media texts. For Gee (2015), reading digital media texts such as those of games is a form of social interaction. The second form of social interaction is that which is characterised by non-involvement (Scollon, 1998). If I analyse the linked actions and activities of joint media engagement as social interaction, then I may argue that the social actors who appropriate digital media texts in their interactions "claim rights of non-involvement and other forms of social positioning … and in doing so also make serious claims of identity for themselves as participants (Scollon, 1998, p. 5). A related finding is located in Lull's (1990) ethnographic study of the social uses of television in family homes. Among other issues, the findings of this study showed that family members use digital media to avoid social interaction. Although Lull's (1990) well designed study concerned television, the findings appear to be applicable in the above episode involving a tablet where Brian avoids interaction with his mother by focusing on digital media. However, the argument of non-involvement to claim identity may apply to older children and adults who have already formed their own selves and habits of mind. The concern in early childhood is creative appropriation of digital media to enrich and not diminish the social and communicative behaviours that children are required to develop at this stage in their lives. To return to Brian's non-responsive behaviour, even if he was claiming his own identity by taking such a position of not wanting to talk, I still maintain that reciprocal communicative acts are necessary for joint media engagement that involves young children. Previous findings suggest that young children are at risk of developmental delay when the talks, play, arguments and counterarguments diminish around the use of digital media (Bronfenbrenner, 1970, 1979; Courage, 2017; Takeuchi & Stevens, 2011). Our focal concern is not to create a situation where once digital media enters into children's life-worlds, the essential behaviours of childhood such talk-in-interaction are displaced (Bronfenbrenner, 1979; Takeuchi & Stevens, 2011). If the social aspect

is lacking, then the whole point of encouraging and empowering parents to use digital media together with their children may appear to be lost. Parents from this standpoint seek to accomplish specific goals as they appropriate digital media in the conversations with young children. The goals may be to bond with the child, to seek information, to inform the child, to highlight critical aspects of the digital media they want the children to focus on or just to link digital media to the everyday experiences of young children. Parents seek in the reciprocal communication with children the "affordances in their talk, abilities, desires, skills, character, and language resources for which" they "have the necessary effective abilities to use" (Gee, 2015, p. 26) to achieve the goals socialisation through joint media engagement.

I have claimed in the preceding section that as much as close physical proximity is important, it is an insufficient social and communicative practice to allow me to conclude that joint media engagement was taking place in the observed families. For this reason, I have added a second social and communicative practice in this section—that of reciprocal communication exchange – which I have argued enriches the experience of joint media engagement. Still, these two social and communicative features are not enough to characterise joint media engagement activities with young children in families. For one, a parent and a young child using digital media together may have body-to-body contact and engage in elaborate bidirectional communicative transactions containing many conversational turns, but that alone may not define joint media engagement activities. In my analysis, mutual visual gaze of the interlocutors on the screen of a digital media device was a common practice across all the eight families. I argue that establishing mutual visual gaze to digital media activity happening on the device's screen may be a vital social and communicative practice that brings about 'joint-ness' in joint media engagement

5.3.3 Mutual visual gaze to digital media activities on the screen.

The alignment of the parents and children's visual line of sight to on-the-screen activities is a necessary social and communicative practice for joint media engagement. The argument I want to make about this point is that simultaneous looking at what is happening on the screen is crucial for setting up joint media engagement activities. I found the establishment of a joint line of sight onto the on-screen digital media activities to be important in all the families that I observed. There were considerable efforts made by parents to ensure alignment of line of sight,

both their own and that of their young children, to the activity happening on the screen of a digital media device in all families. I interpret this observation to mean that establishing a common attentional focus on digital media activities is an essential part of joint media engagement between parents and young children. That mutual orientation of sight on-screen activities, as a necessary social practice for joint media engagement activities rests upon the idea that young children learn best when they can see the concrete objects or events they talk about. This understanding is readily acceptable in developmental psychology (Schaffer, 1992). Parents' efforts under this condition mainly focused on directing children's line of sight, what other researchers have termed 'joint attention' (Bruner, 1995; Hobson & Hobson, 2011), to the features of digital media activities displayed on the screen before they could engage them in conversations about the activities. The underlying principle is that parents and young children have to talk about what they are jointly looking at on the screen. As I indicated, my use of 'mutual visual gaze' parallels the concept of 'joint attention' used by a number of psychologists (see e.g., Bruner, 1983; Bruner, 1995; Hobson & Hobson, 2011; Tomasello, 1999, 2001). I have avoided using the concept of joint attention because its usage involves underlying cognitive aspects (Bruner, 1995; Hobson & Hobson, 2011). Because the subject matter of my thesis focuses more on the social and communicative behaviours around the use of digital media, the use of joint attention goes beyond the scope of my study. Pauline's case of watching Angry Birds show is a good illustration in support of my claim about mutual visual gaze:

Vignette VI

> Pauline is preparing to watch Angry Birds show. A passerby who appears drunk calls out to her mother. For some reason, the man begins to do some funny movements at the entrance of the cybercafé. Pauline notices the man's actions and shouts, "mum look! He is marching. He is happy." "Look on the screen", the mother summons Pauline's visual orientation to the laptop's screen so that she can concentrate on watching the show. During the show, Pauline's attention is drawn to a plain printing paper on the shelf under the counter. She grabs it and begins to play with it. Her mother tells her to stop playing with the paper. She redirects Pauline's visual orientation to the screen by saying, "Stop doing that. Look, look, look at the angry bird" in an intonated voice while pointing to the

screen. Pauline shifts her line of sight from the paperback onto the screen and sees something interesting. She points to the screen as she cheers with her mouth wide open.

In so far as joint media engagement requires both the child and the parent to orient to the same topic, same task, and same screen simultaneously, ways of jointly engaging with digital media activities must also be found by employing what (Goffman, 1971) refers to as 'tie-signs' such as pointing, gazing, touching, and verbal references including tone of voice. These tie-signs are important analytical aspects for understanding the range of semiotic means employed in joint media engagement. The semiotic means used in constructing meaning suggest to us that joint media engagement is a multimodal experience (Marsh et al., 2015). Regulating young children's visual orientation to joint media engagement activities appears to be one of the most critical social behaviours on the parents' side (Schaffer, 1989, 1992). Parents used a variety of visual attention-directing devices to get children's line of sight appropriately oriented on the digital media activities they were engaging with on the screen. In the preceding example, Pauline's mother uses the strategies of verbal referencing including tone of voice, and non-verbal cues such as pointing, to synchronise her daughter's line of sight with hers on what is happening on the screen.

The visual directing strategies employed by Pauline's mother to ensure her daughter's line of sight orients to the digital media activities they engaged with on the screen are similar to the strategies employed by Brian's mother.

Vignette VII

It is about 10 am. Brian and his mother are sitting on a couch in the living room, listening to nursery rhymes on the mother's tablet. The mother is trying to engage Brian by asking questions and encouraging him to sing along to the rhymes. Just like in the other sessions, his concentration is on the screen watching the rhymes, so he does not respond to his mother's questions. The television is on showing a cartoon program. Brian looks up to what is happening on the television. His mother tells him to look at the tablet's screen and sing the rhymes. She asks me if it is fine to switch off the television. I respond by saying I am not paying attention to the television. She switches the television off using a remote control.

I have inferred several points from the Vignette VII example. First, visual co-orientation to digital media activities is vital for joint media engagement. Brian's mother used verbal referencing to redirect Brian's line of sight, which he had directed to the cartoon program on the television, back to the tablet screen so that they can sing the nursery rhymes together. Second, that availability of competing digital media activities (or any other activities not related to digital media) distracts children's visual orientation to joint media engagement activities at home. This common phenomenon of 'availability of competing activities' has been identified in homes where the television is always on in the background to other ongoing sociocultural activities and interactions (Lull, 1990). Danby et al. (2013) in their study about talk during activity when young children use digital media at home found that the presence of other activities in the setting that vie for attention disengages parents and children from the focal digital media activity. Danby et al.'s (2013) claim is reflected in the above episode when the cartoon program on the television disengages Brian from the focal activity of singing nursery rhymes on the tablet. Brian's mother asking me whether to switch off the television or not may suggest one of the ways parents may seek to minimise the number of competing activities that may distract children during joint media engagement, particularly when using mobile digital media devices.

Availability of competing activities in homes had a similar effect on parents. Television diverted parents' visual orientation from joint media engagement activities on mobile digital technologies in the same way it did for young children, supporting Danby et al.'s (2013) and Lull's (1990) argument about the presence of competing activities. Children, in some cases, displayed behaviours that intended to align their parents' visual orientation to joint media engagement activities. Cherry's case of joint media engagement with his father is a good example: Cherry was one year and eleven months when I began my fieldwork for this thesis.

Vignette VIII

> Cherry's father is sitting at the table on a chair. On top of the table lies a laptop, a tablet and a smartphone. Cherry is standing in between his father's legs facing the table where the laptop is placed. The family relocated recently from their hometown to the capital city after Cherry's father got a new job. He has not bought much furniture; there are a few plastic chairs and a table in the living room. Against the wall is a television on a

stand. Cherry and his father are watching videos of animals and birds on the father's laptop. The television is on in the background of the focal activity showing 'afro-cinema' (a West African movie). Cherry sees some birds flying and shouts "kuku! kuku! kuku!" while pointing to the screen. 'Kuku' is a Swahili name for chicken. His father, in an intonated voice, says, "Ooh, you have seen the chicken." "Yes', Cherry replies. He sees cows and shouts again "Ng'ombe, Ng'ombe, Ng'ombe." 'Ng'ombe is a Swahili name for cattle. His father says while laughing, "Ooh, you know cattle." At this point, the father shifts his visual orientation to the movie on the television while Cherry is still looking on the laptop's screen. He sees chicken again and shouts "kuku, kuku, kuku." This time he does not hear his father respond, so he turns to see whether his father is still watching the videos with him. He realises his father's line of sight is on the television, so with his left hand, he taps on his father's thigh several times in quick succession while shouting "kuku, kuku, kuku" and pointing to the laptop's screen with the right hand. His father looks at the laptop screen and repeats what his son is saying.

Cherry's example is intriguing in that it shows how he has attuned to his father's actions during joint media engagement. Young children also displayed sensitivity to their parent's visual orientation. This finding may suggest that just as parents 'tune in' to their children, young children are also highly attuned to their parents' social behaviours in experiencing joint media engagement activities. They want their parents to be with them, talking to them, and just enjoying joint media engagement activities together. The social and communicative feature of managing exchanges and displaying attention are essential in joint activities, and it shows that the participants are actively engaged with one another and in the activities undertaken (Scollon & Scollon, 2004). By keeping an eye on children's gaze, parents monitor children's ongoing attention and participation in joint media engagement. Some researchers such as (Sert, 2015) argued that mutual gaze in collaborative activities has a pedagogical function besides having interactional consequences.

This example, together with the preceding ones, may suggest that the parents' and children's line of sight aligns to the digital media activities on the screens. On the basis of this data, I argue that joint media engagement entails reciprocal communication exchanges based on a shared frame of reference (both the digital media and actual line of sight) to build skills and

extend children's understanding of themselves and their place in material environment in which they live. Thus, the ability to organise children's visual orientation to digital media activities shared on the screen would appear to be an essential component of adults' repertoire of social behaviour in embodied joint media engagement activities. Again, maintaining mutual visual orientation on activities on the screen depends on other contextual factors such as the availability of competing activities and other people present in the same physical space.

So far, I have argued that three interrelated social and communicative features are central in the constitution of embodied joint media engagement activities between parents and young children in their homes. I have described and illustrated the features of physical proximity, reciprocal communication exchanges, and mutual visual gaze during instances of joint media engagement activities. These social and communicative features may seem to be sufficient in setting up and sustaining joint media engagement activities. However, it may be difficult, if not impossible, for 'two people to walk together unless they have agreed' on the things they are going to do. Based on the preceding premise, I argue there is a final social practice that was salient in my analysis that, in its absence, could turn a potentially successful instance of joint media engagement activity into a chaotic experience resulting in a conflict between the parent and child. This social and communicative feature is that of sharing one another's interest in engaging in the digital media activity.

5.3.4 Sharing a common interest in engaging jointly in digital media activity.

My fourth and last claim about the social and communicative features of joint media engagement is that one of the social interactants – either the parent or the child – must agree to engage in the digital media activity chosen by the other interlocutor. The parent and the young child must agree on the activity of engagement, even if they have diverging goals. Parents must find ways of agreeing and settling on a common digital media activity they want to share with the child. The activities decided on must also interest the child. In early childhood, especially for the under threes, it may be necessary that the parent identifies the child's favourite activities and introduces new materials they would like the child to know about within the child's interests. In the vignettes I have presented in the first three social and communicative features, parents and young children joined in the digital media activity that had been initiated by either of them. They shared the selected interest and, even though it was sometimes difficult to understand what

their goals were, especially those of young children, the resulting experiences of joint media engagement were rich with teachable moments. Parents and young children showed enthusiasm for learning and participation during those activities.

In some families, children initiated joint media engagement by choosing the activities they were interested in doing. Parents, in turn, appreciated children's interests and joined them to establish and sustain joint media engagement activities. It was within the children's interests that parents introduced their intentions or goals, such as naming objects, asking children to talk about the objects, and drawing letters. I argue that these instances of joint media engagement effortlessly flowed because parents showed great enthusiasm for children's chosen digital media activities. Pauline's instance of joint media engagement illustrated in Vignette II is a good example of how she chose the activity, and her mother showed interest in the activity.

Vignette IX

> The mother asks Pauline what she is going to do today. Pauline says she is going to watch Angry Birds. She prepares the counter (working space) and places a tall stool closer so that Pauline can reach the counter while sitting on the stool. She places a laptop on the counter, opens it and inserts the unlocking passcode. She engages Pauline during the Angry Birds show by asking Pauline questions about the fish.

I argue that having an interest in children's digital media activities may in itself, be essential for supporting joint media engagement activities. It is not necessary for parents to introduce activities where they have pre-determined goals in mind. As vicars of the culture they value and want to inculcate in young ones, they can still achieve their intentions by homing in on children's chosen digital media activities and steering the joint media engagement towards the valued behaviours they want children to learn.

In other families, parents initiated joint media activities by opening specific digital media content and inviting young children to join them. Unlike Ian's instance (presented in vignette XI), all the children in the other seven families appeared interested in what their parents wanted them to do. Where children showed an interest in parents' chosen digital media activities, the interactive processes in joint media engagement activities unfolded successfully.

Andrew's instance of joint media engagement presented in Vignette I is an example of how he was interested in the letter app that his father had launched for him. Although Andrew initiated the instance of joint media engagement by encountering a problem unlocking the phone, taking the phone to his father to help him unlock it, his father chose the letter app for him.

Vignette X

> Andrew goes to his father after failing to unlock the phone. He hands it to his father while vocalising. His father takes the phone and unlocks it while asking him what he wants to do with the phone. He taps on a letter app, and it opens, showing the large letter, hands the phone to Andrew and continues to converse with a visitor. Then Andrew walks up to his mother for help when he realises his father is not giving him attention. The mother pulls him closer to her body so that she can help him play the letter app. Andrew touches on the screen, and the app closes. His mother helps him to open the same letter app, and he does not protest. The mother sensitively calibrates her hand with that of Andrew to help him draw the letters. At some point, she withdraws the direct help of holding his hand and instead demonstrates on the screen how to draw the letters.

Andrew was interested in the already chosen digital media activity, and the resulting storyline of joint media engagement is warm and elaborate. I suggest that children must be captivated by digital media activities for joint media engagement to take place with their parents. However, what exactly happens when the parent has a goal to pursue and the child does not want to be engaged in the digital media activity the parent has chosen? The following vignette summarises Ian's experience of being in opposition to his mother's interest. Ian was three years old when I started observing him.

Vignette XI

> Ian is standing at the table with his friend. He asks his mother if he can play with her phone. His mother asks him, "What do you want to play? Are you going to play the letter app? I am not giving you the phone if you are not going to play the letter app. Can I give you the phone to play the letter app?" Ian walks up to his mother and stands in front of her. His mother is sitting on the bed—the family stays in a single room. "Can I

give you? Okay here you go", says his mother. The mother requests him to wait as she launches the letter app for him. He is not patient enough, and he begins to throw tantrums holding onto his mother's dress. "I am going to give your friend the phone if you don't play the letter app, okay?" the mother tells Ian. "Don't give him," Ian objects. His mother tells him he is not going to give his friend the phone. The mother launches the letter app, hands the phone to Ian, and tells him to play. Ian tries to move away from his mother toward his friend, but the mother holds his hand and tells him to sit on a chair that is close to her. He sits down and gazes on the phone's screen. The mother pushes a gas cylinder out of her way. She stands up at the back of the chair Ian is sitting on and leans her head forward to see how Ian is going to play the letter app. She realises that Ian has closed the letter app and opened the camera. Mother tells him not to take photos but to open and play the letter app as she points where the letter app is on the screen. Ian tells her that the app cannot open. Mother calls Ian's friend to come and take the phone because Ian is not playing the letter app. Ian launches a car-racing app. His mother takes the phone and closes the app. She tries to relaunch the letter app, but it seems the phone has frozen and cannot respond. She tells Ian to turn the phone off and on again. She tries to show him where to press but Ian storms out and walks to the door throwing tantrums. No joint media engagement activity took place on this day during the observation period.

I argue that, in the above incidence, joint media engagement does not take place because the mother's interest does not match that of Ian. This finding supports previous findings, which suggests that sometimes children resist co-use of digital media with their parents (Marsh, 2017). Marsh (2017) studied parents' support of children's digital literacies at home. Parents in her study reported that young children showed independence in the use of digital media and would resist parent's attempts to co-use digital media with them. The resistance to co-use digital media does not mean, however, that Ian never had sustained joint media engagement with his parents at home. In another instance, recorded on a different day, Ian is interested in the same activity as his mother, and they had a very engaging joint media activity. In fact, the activity he was interested in (letter app) is the same activity presented in the above vignette, which he was not interested in on this particular day. His interest in the above episode of joint media engagement has shifted, and he is not interested in playing the letter app. However, the incidence illustrated by the above vignette suggests that having a mutual interest in digital media activities is central

to the establishment and maintenance of joint media engagement activities between parents and young children. When young children are less oriented to the digital media activities selected for them by their parents, it may be challenging to establish and sustain joint media engagement. I argue that having a common interest is a crucial social practice for joint media engagement to occur. The crucial question at this point is, what can parents do to ensure their interests and goals match those of young children in joint media engagement? Mehus and Stevens (2011) suggested a possible solution in this case by arguing that:

> [p]arents can enhance the quality of JME by allowing children the opportunity to initiate them and guide their direction; i.e., if, rather than pursuing their own agendas for children's learning (or those of television shows), parents attend to their children's reactions to television and elicit and respond to their comments. (p. 21)

From a mediated discourse perspective, researchers expect interactions involving rebellion as children grow and begin to seek independence from other social actors (Scollon, 1998), including their parents.

5.4 Conclusion

In this chapter, I have described four interrelated social and communicative features instantiated in joint media engagement between parents and young children in homes. I have argued that all four social and communicative features appear to be crucial for structuring and organising joint media engagement activities with young children. Why would someone have an interest in these social and communicative aspects that are unremarkable everyday happenings of young children's lives in everyday settings? To any observer, the identified social and communicative features present in joint media engagement are ordinary interactions that characterise children's playful activities. However, these unremarkable things in everyday settings matter because they are means through which young children construct social meaning in the material world (Silverman, 2013b). Houen et al. (2017) view social and communicative features as children's displayed knowledge or conceptual understanding that need to be supported by adults. The question then becomes, how can joint media engagement be used to *support* and *extend* the displayed knowledge of young children? In chapter six, I turn my focus

on how joint media engagement may provide learning opportunities in the context of interpersonal digital media use in the home with young children.

Socio-contextual theorists consistently assumed that learning arises from interpersonal interactions and communication with other members of the culture (see e.g., Bronfenbrenner, 1977, 1979, 1993; Bronfenbrenner & Morris, 1998; Gauvain, 1995, 1998, 2001, 2013; Gauvain et al., 2013) particularly in the case of young children participating in sociocultural activities of a particular community (Gaskins, 2013; Gauvain, 2001; Hedegaard, 2009; Rogoff, 1993, 2003; Schaffer, 1989, 1992; Tudge, 2008; Tudge et al., 2011; Tudge & Hogan, 2005; Tudge et al., 2009; Tudge et al., 2016; Vygotsky, 1929, 1978, 1994, 1997a). Building on intersubjectivity and embodied interaction for the purposes of this study, I propose the notions of *intersubjective positioning* (Kravtsov & Kravtsova, 2018; Kravtsova, 2010) and *affective attunement* (Stern, 1974a, 1974b, 1977, 1985a, 1985b; Stern, Hofer, Haft, & Dore, 1985; Winnicott, 1965, 1971b) as core psychosocial processes displaying learning in joint media engagement. I explain these ideas in relation to the social and communicative dimensions of joint media engagement in the next chapter.

CHAPTER SIX: DISCUSSION
THE DEVELOPMENT OF AN EXPLANATORY THEORY: JOINT MEDIA ENGAGEMENT AS A 'POTENTIAL SPACE' FOR LEARNING

6.1 Introduction

In the previous chapter, I have described four interrelated social and communicative features I argue are instantiated in joint media engagement of parents and young children in homes. Specifically, I have argued that body closeness, mutual interest, mutual visual gaze and reciprocal communication exchanges are necessary social and communicative features constituting joint media engagement of parents and young children in the eight Kenyan families that participated in this study. So, what may these social and communicative features, around the use of digital media, tell us about the type of learning that may occur in joint media engagement? What is the point of knowing the social and communicative features available in joint media engagement? In other words, how do I make sense of these social and communicative features characterising parent-child interactions with and around digital media? Based on the identified social and communicative features that characterise parent-child joint digital media use, it is now possible to make some tentative nuanced claims about the potential of joint media engagement in relation to children's learning. In this chapter, I provide as a response to my third question, a tentative theorisation of joint media engagement based on my emerging definition of joint media engagement involving the identified social and communicative features.

In my study, there is no indication that social and communicative features necessarily suggest joint media engagement is good for young children's social and psychological well-being. My primary objective for researching joint media engagement in families was to identify social and communicative features instantiated with and around digital media and theorise those aspects in terms of what they might tell us about the forms of learning potentially taking place in joint media engagement with young children. To achieve this goal, my focus in this chapter was theorising the identified social and communicative aspects of dyadic digital media use responsible for buffering the 'perceived' negative *effects* associated with digital media, on the one hand, while fostering positive learning and developmental competencies on the other

(Bronfenbrenner & Morris, 2006). The goal of this theorisation is to encourage parents to use digital media with young children to *support* and *extend* their emerging social and communicative abilities as their displayed knowledge (Houen et al., 2017).

The social and communicative features of joint media engagement presented in chapter five are based on my observations of the interpersonal interactions of parents and young children as they jointly used digital media in their home settings. It is important to know the observable aspects or behaviours during joint media engagement, but that alone is not enough for knowing the potentiality of joint media engagement with young children. The social and communicative features of joint media engagement on their own do not suggest whether joint media engagement provides a rich platform for young children to learn. It is crucial at this point to begin to develop a tentative theorisation of joint media engagement based on the social and communicative aspects I have identified, evaluating the potential of joint media engagement in providing a rich platform for learning. I acknowledge the rich literature about young children's engagement with digital media suggesting children are engaged in a range of multimodal digital literacies (see e.g., Marsh, 2017; Marsh et al., 2015). However, we still have little theoretical understanding of the learning processes that take place when children use digital media with significant others in their homes. I aim to move a step further and answer the question: what is it that potentially makes learning possible in joint media engagement? Previously I have argued that the setting's contextual features are necessary but not sufficient for analysing *embodied* joint media engagement between parents and young children in homes. Because of the inadequacy of the contextual factors, I draw on other theoretical resources to allow me to theorise the learning potential of joint media engagement.

In the present chapter, I argue that the four interrelated social and communicative features evident in joint media engagement constitute what Winnicott (1964, 1965, 1970) refers to as a 'holding' or 'facilitating' environment loaded with emotionally charged sensitive interpersonal interactions between parents and young children. The chapter is organised into two sections. The first section explicates Donald Winnicott's theoretical propositions about the 'holding environment' and the 'potential space' of cultural experiencing. The second section discusses joint media engagement from the standpoint of potential learning space constituted by two psychosocial processes. The chapter closes with a summary of the main claims.

6.2 The Concept of 'Holding/Facilitating Environment' and 'Potential Space'

It is well established theoretically and empirically that effective learning occurs in a facilitating environment. Donald Winnicott (1896-1971) provided an elegant theorisation of how a facilitating environment for young children's learning may look. Writing from a psychoanalytic standpoint, Winnicott (1964, 1965, 1970, 1971a, 1971b) proposed the concept of 'holding' or 'facilitating' environment. By this, Winnicott (1970) meant that primary caregivers, usually mothers, strive to establish and maintain emotionally secure environments in which children's optimal learning and development of character or personality takes place. The enabling conditions provided in the holding/facilitating environment create a *potential space* where young children, and their significant others, experience culture, play, imagination, and creativity (McCabe, 2011; Winnicott, 1971a, 1971b). The provision of consistent enabling conditions allows young children to develop stable personhoods. The development of character or personhood derives from play, talks and family routines and festivities that involves arguments and discussions about everyday events (Bronfenbrenner, 1970, 1979). The Winnicottian notion of 'holding' or 'facilitating' is similar to the socio-contextual understanding of conditions of person-environment interaction (Bronfenbrenner, 1970, 1979, 1992, 1993; Bronfenbrenner & Morris, 1998, 2006; Vygotsky, 1929, 1978). Winnicott (1965) does not explicitly use the concept of the zone of proximal development; rather, he uses the term 'potential space'. The concept of 'potential space' might equate to Vygotsky's (1978) zone of proximal development. There is a range of mediation processes and scaffolding behaviours occurring in the zone of proximal development enabling young children to perform complex tasks they would otherwise not achieve if they were to work without the support of more capable others (Vygotsky, 1978).

Winnicott (1965), a contextualist, approached the subject matter of human learning and personality development from a psychoanalytic point of view, using the term 'holding environment' to denote the conditions that potentially create 'the zone of proximal development' where optimal learning takes place. From a socioecological point of view, Bronfenbrenner and Morris (2006) argued that proximal processes, that is, the interactions and tasks or activities of increasing complexity, are the engines of learning. Given that learning takes place in the zone of proximal development (Vygotsky, 1978), which is potentially created by enabling conditions of the 'holding environment' (Winnicott, 1953, 1960, 1965, 1970, 1990),

I offer the possibility that proximal processes occur in the *potential space* to cause learning. I suggest that a Winnicottian conceptualisation of learning though from a psychoanalytic perspective is complementary to socio-contextual conceptions largely derived from developmental psychology (cultural-historical theory, socioecological theory, ecocultural theory, situated learning, sociocultural theory, activity theory, mediated discourse and the like).

Winnicott (1965) believed that young children develop stable personhood or individuality through interpersonal interactions with emotionally attached others, an observation reminiscent of Bronfenbrenner's (1990) proposition about 'irrational emotional attachment' of the child to the primary caregiver. Bronfenbrenner argues that for development to occur "somebody's got to be crazy about the child, and vice versa!" (p. 32). Being 'crazy' implies:

> That the adult in question regards this particular child as somehow special—especially wonderful, especially precious, even though objectively the adult may well know that this is not the case. It is the illusion that comes with love—an illusion that flows in both directions. For the child, the adult is also special—someone to whom the child turns most readily in trouble and in joy, and whose comings and goings are central to the child's experience and well-being. (p. 32)

The argument I want to put forward is that the social and communicative features that happen with and around the use of digital media constitute a holding environment that creates a *potential space* (Winnicott, 1953, 1965) for learning in the context of joint media engagement (Takeuchi & Stevens, 2011). The created potential space affords children with the possibilities to "experience play, creativity, and imagination" (McCabe, 2011, p. 239) while being supported through "consistent, reliable maternal means of holding, containing and mirroring" (McCabe, 2011, p. 231). If my claim is accepted, then, joint media engagement becomes a *potential* social and communicative *space* where parents and young children construct social reality or experience culture (Winnicott, 1953, 1960, 1969) using digital media as mediational means to accomplish situated activities (Lave & Wenger, 1991; Rogoff, 1995; Scollon, 1998; Wertsch, 1991, 1994). The focal concern of parents in this *space* is not digital media, rather, the child becomes the central social actor, whose repertoire of multimodal, social and communicative competencies (Daniels, 2017), displaying their knowledge (Houen et al., 2017), are seized upon by the parent (or other social actor engaged in joint media engagement with the focal child—a

peer, a sibling, a relative) (Takeuchi & Stevens, 2011), and amplified or *extended* (Bruner, 1966; Ratner, 1997). In most of my observations, children showed much agency, readily displaying their knowledge with parents capitalising on children's displayed knowledge to create a narrative around what children already knew. In the *potential* social and communicative *space* of joint media engagement, parents were viewed negotiating and renegotiating the meanings of digital media to construct activities relevant to their situations or purposes and, in the process, achieved a sense of intersubjectivity enabling reciprocal interaction and communication to take place. It is this intersubjective communication that may contain mechanisms that to a large extent determine the learning and developmental outcomes of joint media engagement with very young children. In this chapter, I return to the data to show examples in support of this claim.

The argument that the social and communicative aspects described in the previous chapter constitute a holding environment creating a *potential* social and communicative *space* in joint media engagement raises the question about the kind of processes or mechanisms happening in this space of joint media engagement that are potentially responsible for learning. What happens in the social and communicative space of joint media engagement? I hypothesise that two psychosocial processes occur in the potential social and communicative space of joint media engagement that explains how learning happens. These processes are *intersubjective positioning* and *affective attunement*. This chapter does not explain specific areas or domains of learning as it was not my goal to examine the areas where the social and communicative features of joint media engagement potentially provide opportunities for learning. Later empirical research efforts may focus on specific domains of learning to test my evolving theory of joint media engagement. The argument that I have made is grand, and I may be criticised for making such a brazen allegation. However, I am prepared to document and defend my case. As I pointed out in chapter two, there is considerable literature that claims digital media is anti-developmental, especially for the under threes. I do not wish to discredit the knowledge we have so far from *media effects* research in our understanding of digital media use by young children at home. However, we know that in the contemporary period of mediatisation (Couldry & Hepp, 2017), young children are increasingly using digital media in homes (Marsh, 2017), so I am compelled to ask new questions. What does joint media engagement look like in homes with young children? How might this function as a platform for learning? I already noted in chapter

one that ‘mediatisation’ is the process through which social and cultural activities of institutions, individuals, or cultural groups assume digital media forms.

The activities and social and communicative features ensuing when parents and young children jointly used digital media were warm, affective, embodied and mutually coordinated. How do I make sense of this? My first-hand observations in families potentially contradict the previous literature. How do I resolve this? How does digital media potentially mediate valued learning in parent-child dyadic interactions? To help me respond to these new questions, I draw on developmental theoretical resources that speak directly to the social and communicative features instantiated in joint media engagement described in chapter five. Specifically, I draw on four conceptual tools: the holding environment, potential space, intersubjective positioning, and affective attunement. I do not claim to present a definitive theory of joint media engagement. What I am putting forward is a tentative explanation of how joint media engagement potentially provide opportunities for culturally valued learning.

6.3 Potential Space: Joint Media Engagement as a Potential Social and Communicative Space

Although Winnicott’s conceptual and empirical work focused on mother-infant relationships in the early months of life, researchers have widely deployed his ideas in a variety of settings, including schools (Reinstein, 2013). For instance, Bainbridge (2014) uses Winnicott’s theoretical constructs to examine the use of digital technologies for teaching and learning in higher education institutions. Silverstone (1994) used Winnicottian concepts to examine how families experience television in homes. For Winnicott (1965), young children have an innate ability to follow a natural course of development when provided with a supportive environment. The natural unfolding of developmental processes takes place within a special and unique relationship, usually that of the mother and the infant. The implication is that the holding environment facilitates human development—it has potential mechanisms or engines that drive learning and character development. The mother is the one usually providing this facilitating environment in the early years of development (Reinstein, 2013). In describing ‘holding environments,’ Winnicott (1965) used the noun ‘mother’ metaphorically to indicate any adult primary caregiver, including a teacher in the case of centre-based care.

Winnicott's idea of the 'holding environment' is useful for thinking about the interpersonal relationships of parents and young children while using digital media together. This is particularly so because of the parents' sensitivity and responsiveness to children's needs observed during instances of joint media engagement, finding a parallel with (Winnicott, 1960)'good-enough-parent.' Winnicott (1960) acknowledged the fact that every mother had a unique relationship with her infant and, as such, there is no such thing as perfect mothering or child rearing/socialisation. Winnicott contended that what mothers do is strive to be 'good-enough' parents to their children through monitoring a variety of multimodal communication cues including eye gaze, physical holding, and voice variation. For Winnicott (1960, 1965, 1970), a 'good-enough' mother/parent strives to provide an emotional holding environment facilitating children's learning and movement toward independence and competence. Thus, the holding environment provides parents with a *potential space* where movement in terms of learning and development take place, much like movement toward mastery in Vygotsky's (1978) zone of proximal development. The role of the adult in both Winnicott's (1971b) 'potential space' and Vygotsky's (1978) 'zone of proximal development 'is creating enabling conditions through what Bronfenbrenner (1992) refers to as proximal processes—interactions and tasks of increasing complexity. It is through active engagement and participation in increasingly complex interactions and sociocultural tasks that learning takes place (Kravtsov & Kravtsova, 2009; Rogoff, 1993, 1995, 2003; Rogoff et al., 1993; Tudge, 2008; Tudge et al., 2011; Tudge et al., 2000; Tudge & Hogan, 2005; Tudge et al., 2017; Tudge et al., 2009; Tudge et al., 2016; van der Veer, 2012; Vygotsky, 1978, 1994, 1997a).

Winnicott's metaphor of 'holding environment' conceptualises the psychosocial processes made possible in the *potential space* of learning. The idea of holding environment also considers the emotional aspects of intersubjective attunement as core elements in children's learning during the early years of life (Winnicott, 1965). Having provided a brief sketch about the psychosocial concepts of 'holding environment' and 'potential space,' I now move on to explicate the psychosocial processes taking place in the social and communicative space created in joint media engagement between parents and young children at home. How are these psychosocial processes conceptualised in terms of participant positioning in joint media engagement, attune to and exploit the multimodal social and communicative features in the interpersonal interactions using digital media as mediational means?

6.3.1 Intersubjective positioning in joint media engagement.

I begin with an exposition of intersubjective positioning as ingeniously proposed by Kravtsova and her colleagues (Kravtsov & Kravtsova, 2010, 2018; Kravtsova, 2006, 2009). Essentially, the ideas behind 'intersubjective positioning' or 'interactional positioning' especially in early childhood are those of 'playful pedagogies' (Burnett & Merchant, 2018). There is a growing body of literature looking into the issue of pedagogies parents use while co-using digital media with young children (see e.g., Marsh, 2017; Marsh et al., 2015; Plowman & Stephen, 2007; Plowman & Stephen, 2013; Plowman et al., 2010b; Plowman et al., 2012). My work, while not deviating from current knowledge in the field builds on pedagogical notions such as 'guided interaction' (Plowman & Stephen, 2007; Plowman & Stephen, 2013) and elaborates on those notions from a different angle by drawing on diverse but complementary theoretical perspectives.

Intersubjective positioning is "the discursive process whereby selves are located in conversations as observable and subjectively coherent participants in jointly produced storylines" (Davies & Harré, 1990, p. 48). The concept denotes the fluid enactment of selves in discursive contexts and practices of interpersonal interactions (Harré & Gillett, 1994). Intersubjective positioning has been extensively researched and developed in early childhood by Kravtsova and colleagues vis-à-vis the reciprocal position that young children and adults take in relation to each other, especially in play activities in pre-school settings (Fleer, 2010). Advancing on Vygotsky's (1929, 1978) cultural-historical understanding of learning, particularly on the concepts of mediation and the zone of proximal development, Kravtsova (2009) proposed five intersubjective positions that preschool teachers and children occupy during play activities, namely: the above position, below position, primordial we (great-we) position, equal position, and independent position.

The five intersubjective positions are analogous to 'roles' as conceptualised in the sociological literature (Bronfenbrenner, 1979). According to Bronfenbrenner (1979), roles are the social "expectations about how a person in a given social position is to act towards others" and "how others are to act toward that person" (p. 85) implying understanding of how an individual's role in interpersonal interactions relates to those of others who are part of the interactional unit. I use Kravtsova's (2009) intersubjective positioning because Bronfenbrenner

(1979) does not provide a clear-cut differentiation of the roles of parents and young children in joint sociocultural activities. Furthermore, Bronfenbrenner (1979) derived his theoretical formulations based on empirical data collected from mother-infant interactions in the early weeks of the infants' lives. The use of intersubjective positioning instead of fixed roles permits an understanding of the "diverse and changing" enactment of the agency that "influences and explains" parents' and young children's actions in interpersonal interactions as "discursive agents" (Harré & Gillett, 1994, p. 36). Discursive agents are individuals who use mediational means creating and enacting activities, meanings and practices in the course of interpersonal interaction and communication (Scollon, 1998; Scollon & Scollon, 2003, 2004; Wertsch, 1991, 1994).

Why is intersubjective positioning particularly important in joint media engagement? I suggest it is one of the psychosocial processes, through which children may learn in the context of joint media engagement. I have argued that joint media engagement is a *potential space* for social and communicative competencies to emerge or be displayed. Broadly speaking joint media engagement (Mehus & Stevens, 2011; Takeuchi & Stevens, 2011) can be viewed as a discursive space (Fernyhough, 1997; Harré, 1991; Harré & Gillett, 1994) that may be used by parents and young children for constructing social reality with and through digital media (Couldry & Hepp, 2017). Such discursive spaces necessarily involve dialogic interaction (Weizman, 2008). Learning in the early childhood years is predicated on principles of relationality and reciprocity (Bronfenbrenner, 1977, 1979). Therefore, in my view, the point of departure for theorising joint media engagement is in understanding the dynamic social and communicative features that constitute it. The social and communicative features of joint media engagement are, manifestly, relational (Levine et al., 2014; Takeuchi, 2014; Takeuchi & Stevens, 2011). Renowned media studies scholar David Buckingham brought to the fore the issue that relational practices especially those that concern 'pedagogy' of digital technology use in homes are not known. Researching young children and new media at home, Buckingham (2006) reported that even though parents had bought digital media technologies and equipped them with educational software, children rarely used those educational resources, and when they did use them, they played games to allay boredom or to fill in time when they had nothing else to do. The use of digital media for these purposes, however, should not profer the idea that playing digital games is a waste of time for young children. Gee (2003, 2015) one of the leading

scholars of video games strongly advocates for educational video games as they help awaken children's creativity. Returning to Buckingham's (2006) research about the use of digital media technologies by young at home, he also observed that parents did not understand how to support children in the use of computers. To indicate areas of further research based on his findings, Buckingham (2006) suggested there was "need for further research on the *pedagogy* of computer use in the home" (p. 86 italics in original). The incorporation of Kravtsova's (2009) intersubjective positioning, as one of the playful pedagogic strategies parents use during embodied joint media engagement activities with young children, is one possibility in response to Buckingham's (2006) call for researchers to identify digital media pedagogy.

Although ideas about intersubjective positioning as a playful pedagogical strategy developed in the context of centre-based learning (Kravtsov & Kravtsova, 2018; Kravtsova, 2009), I draw on them to help me explain collective sociocultural activities, such as joint media engagement activities, happening in everyday life settings such as homes. It is worth noting that intersubjective positions are not static; they continuously shift in interpersonal interaction and communication as adults, and young children temporarily occupy them during joint sociocultural activities (Davies & Harré, 1990; Harré & Gillett, 1994; van Langenhove & Harré, 1999). The notion of pedagogy that I have adopted in this thesis is somewhat different from that used in formal schooling and curriculum. Pedagogy is explained not in its strict sense of instruction as implied in school curriculum and policy but, rather, the term is used to explicate individuals' ways of knowing, their histories of participation, and how such knowing mediates ongoing sociocultural activities (Hall & Murphy, 2008). I use pedagogy to imply any form of practice that is "intentionally" applied particularly by parents to "influence the production of meaning" or to construct social reality in the conduct of everyday lives (Giroux & Simon, 1989, p. 230). This way of framing pedagogy decontextualises its application from formal to informal settings to cover diverse settings and age groups not necessarily associated with formal instruction in school. Viewed this way, the focal concern of pedagogy in informal settings concentrates on valued cultural forms of learning produced and transformed as parents and young children participate in and engage with cultural forms of human social existence such as digital media.

Early childhood research, applies the concept of intersubjective positioning with regard to how adults and children act in sociocultural activities in pre-school settings albeit in different constellations (Devi, Fleer, & Li, 2018; Fleer, 2010, 2015; Kravtsov & Kravtsova, 2009, 2018). Devi, Fleer, and Li (2016, September) used the concept of intersubjective positioning to study mother-child collective play in the home context with a focus on how parents support children's mathematics and scientific conceptual development with non-digital toys. As far as I have been able to determine, this concept has not been applied in research about interpersonal interactions of parents and young children during digital media use in homes.

In observing parents' interactions with young children while jointly using digital media, it was clear that the intersubjective positions children and parents took were distinct. Just like other institutional contexts such as daycare centres, pre-schools, and schools, the home is a context for socialisation (Bronfenbrenner & Morris, 2006). As parents and young children engage in the everyday social and cultural forms of life that bring about learning, including participation in digital media activities, family members assume different positions with reference to each other. Relational participation in valued sociocultural activities requires that adults, who are more skilled in those activities, guide young children so that they can also internalise the cultural methods of being that will eventually make them functional members of a given society (Rogoff, 1995, 2003; Rogoff et al., 1993; Vygotsky, 1978, 1997a). Yet in the process of 'becoming', children at the same time exhibit the agency of 'beings' by actively shaping the course of their own development, even in the first few weeks of life (Bronfenbrenner, 1977, 1979; Bronfenbrenner & Crouter, 1983; Bronfenbrenner & Morris, 1998, 2006; Rogoff, 1995; Stern, 1974a, 1974b; Stern et al., 1985; Vygotsky, 1994). Young children are active in their attempts to make meaning from sociocultural activities using material objects and other symbolic resources provided by culture (Rogoff, 1995). In doing so, they do not take adults' guidance as a given but transform that guidance in ways that align with their own previous experiences, current abilities, and emerging interests.

Kravtsova (2009) argues that movement in the zone of proximal development "involve[s] features of children's communication with adults" (p. 22). Kravtsova (2009) raises the question about the forms of communication features that are effective for movement in the zone of proximal development; the forms of communication features found in the

intersubjective positioning assumed by the participants in interpersonal interactions. As mentioned earlier, Kravtsova (2009) offers five intersubjective positions, but here, I expand on only four. I do not have data to illustrate the fifth positioning—the independent position because my focus during fieldwork was to record the parent-child dyad using digital media. I immediately stopped recording after I felt the joint activity involving digital media was over. In the following section, I discuss each of the remaining four intersubjective positions, illustrating them with relevant examples from the data.

6.3.1.1 The 'under' position.

A more skilled social partner assumes the 'under' position or is 'below the child' in an interpersonal interactive moment when he or she allows the child to steer the interaction (Devi et al., 2016, September; Fleer, 2010, 2015; Kravtsov & Kravtsova, 2018; Kravtsova, 2009; Murphy, Doherty, & Kerr, 2016; Murphy & Hayes, 2015). The adult is actively involved in the co-construction of social and psychological reality in joint sociocultural activity, but he or she leaves greater responsibility for the child to lead the activity (Tudge & Hogan, 2005). This kind of positioning of the adult in activities such as joint media engagement recognises young children as active agents who structure, organise, and derive meaning from their life-worlds (Bronfenbrenner & Morris, 2006; Tudge, 2008; Tudge et al., 2006; Tudge & Hogan, 2005). This intersubjective positioning by the parents frequently occurred with the three-year-old children in the study, who had a higher level of language mastery compared to the younger children who did not verbalise their thoughts and feelings as much. Here, parents appeared to transfer greater responsibility for performing tasks to the children and sometimes assuming or even pretending, they did not know about particular objects, events, and would, therefore, ask the child what they were (Kravtsov & Kravtsova, 2018). Pauline's case with her mother provides an example of her mother taking an 'under' position to allow Pauline to take charge of the activity of watching the Angry Birds show. Pauline's conversation with her mother as they were watching Angry Birds is characterised by her mother using phrases such as "Show me the small fish", and questions such as "Where is the small fish? What is the color of the fish? What is it saying? These phrases and questions by the mother are typical of parents positioning themselves intersubjectively below the children. This 'under' position of the parent is evident in the following episode of Pauline's dialogue with her mother while watching Angry Birds show on a laptop computer:

Extract III

Mother: Show me the frog.

Pauline: [Shows by pointing on to the screen].

Mother: What is this colour? [Points to the colour on the screen].

Pauline: That is…

Mother: Touch on the colour and tell me its name

Pauline: This is colour orange

Mother: That is orange

Pauline: Yes

Mother: What about the colour of the fish?

Pauline: The fish, blue, black and yellow

Mother: Wow

Pauline: And the eyes

Mother: What colour are the eyes?

Pauline: White and purple

Mother: Wow! It is enjoying the water. What is it doing?

Pauline: It is going there. It is going to look for the mum

Mother: It is going to look for the mum.

Pauline: It is going to look for the baby.

Mother: Where is the baby?

Pauline: The baby is gone.

Mother: Show me.

Pauline: It is gone.

Mother: It is dark in the night they are going to sleep, eeh!

Pauline: Yes.

Mother: Show me their house.

Pauline: Their house, there (points to the screen). It is in the night. (She picks a book and a pen from the shelves and starts to draw a fish).

The above excerpt shows, to use Rogoff's (1990) understanding, an episode of 'guided participation' or 'guided interaction' (Plowman & Stephen, 2007; Plowman & Stephen, 2013) in which the mother regulates her daughter's actions. The below position of parents recognises young children's autonomy as capable participants in the co-construction of reality with other partners (Rogoff, 1993; Rogoff et al., 1993) in joint media engagement. This positioning also promotes the agency of young children in joint media engagement experiences.

Although Pauline's mother may appear to take a leading role in the joint sociocultural activity mediated by digital media, her leading role is that of eliciting more engagement and participation from Pauline and scaffolding her understanding of the world through digital media. Pauline's mother knows the answers to the questions she is asking, but her intention is to have her daughter take responsibility for and regulate her own learning. This allows the mother to have a storyline for a conversation with her daughter about media and common cultural activities and events that are known to her daughter in her culture. Similarly, Pauline would appear to be assuming the 'under' position as the mother takes the leading role of initiating the dialogue by asking questions. However, she actually holds the 'above' position, allowing her to sometimes correct or say something different from what her mother has just said. The mother acknowledges all her daughter's contributions in the conversation mediated by digital media. In keeping with this line of thinking, Murphy and Hayes (2015) observe that in the under position, the adult who may be a teacher or parent may sometimes act as a 'fool' asking naïve questions

that are easily answered by children. By assuming the under position in joint media engagement, the mother ensured that her daughter explained and reflected on events, characters, and the whole activity of joint media engagement, which is important for her learning (Devi et al., 2016, September; Kravtsov & Kravtsova, 2018; Kravtsova, 2009; Rogoff et al., 1993).

Just like the case of Pauline's experience of joint media engagement with her mother, other parents in the study assumed the under position in a supportive manner to maintain their children's present capabilities and promote them through strategies such as praise and holding the tablets or smartphones so that children could easily perform the activities. Sometimes, parents adopted this strategy to challenge children, especially older ones like Pauline. By taking a guiding responsibility—the under position—Pauline's mother allowed her daughter to assume the above position, which enabled her to be more active in joint media engagement and verbalise her participation and understandings more. Her mother's primary role in the interaction became that of stimulating talk and modelling language, especially when Pauline mispronounced words. These strategies used by the mother, according to Stern et al. (1985) and Trevarthen (1979, 1998), are typical parental (particularly maternal) social stimulation acts that mothers provide to elicit and sustain children's performance in sociocultural activities. Thus, the intensity, complexity, and frequency of mothers' questions (Stern, 1985b), and the elicitation strategies for more talk (Schaffer, 1989, 1992) during joint media engagement, would appear to be critical ingredients for children's increased action leading to conceptual understanding of the shared digital media experiences. The under position occupied by parents allows young children to take responsibility for their learning by actively participating in and structuring (Rogoff et al., 1993) joint media engagement experiences. Accordingly, the parents' intentions in this position may be to foster mature roles and the skills of their young children in the use of digital media in ways that transform conditions of their lives.

6.3.1.2 The 'above' position.

This intersubjective position happens when an adult, typically a teacher or a parent, act 'above the child' (Kravtsova, 2009). In this position, the adult, who is an experienced member of a particular culture, guides novices so that they can eventually become experienced members of that culture (Gaskins, 1999, 2013; Gauvain, 1995, 1998, 2001, 2013; Rogoff et al., 1993; Vygotsky, 1978). As noted earlier, these temporarily occupied intersubjective positions kept

shifting between the parents and their children. On many occasions, especially for younger children, parents assumed a 'teaching' role in joint media engagement by intentionally guiding children to perform digital media activities. This guidance was often in the form of practically doing the activity for the child as s/he observed. Rita's example of playing Candy Crush with her mother is a good illustration.

Vignette XII

> Rita's mother is sitting on the couch, holding Rita's younger brother on her lap. Rita asks her mother if she can play with her phone. The mother launches Candy Crush app and gives her the phone. Lavender (participant in this study) who has been playing with Rita goes back to her mother—in their house, which is opposite Rita's family house. Rita starts to play, but her mother realises she needs help. Instead of guiding Rita in playing the game, she plays it without instructing her daughter. Rita's brother, who is playing with a shaker, cries and his mother puts him down on the floor and gives him his shaker to play with. She sits back and leans sideways close to Rita. Without talking, she starts to play the game as Rita watches. She gives Rita opportunities to play a few moves, but when she realises Rita is stuck, she plays the game.

In the above example, Rita's mother is 'above' her daughter in joint media engagement; she plays the game while Rita watches. Although she leaves some room for Rita to play the game, when Rita does play, her mother dominates the activity by making more moves, leaving Rita with no option other than observing as her mother plays. From the standpoint of socio-contextual perspective, Rita is learning through observation (Rogoff, 1990, 2003; Rogoff et al., 1993). In support of observational learning in sociocultural activities, Bronfenbrenner (1979) suggests that:

> The environmental events that are the most immediate and potent in affecting a person's development are activities that are engaged in by others with that person or in her presence. Active engagement in, or even mere exposure to, what others are doing often inspires the person to undertake similar activities on her own. (p. 6)

Therefore, for Bronfenbrenner (1979), Rita learns the joint media engagement activity by virtue of it happening in her presence. However, in this case, Rita is not only an observer of joint media engagement activity because she does get opportunities to play.

When young children's intent appears to be parallel to their parents' and accomplishing the activity requires a decision about the activity to be shared, the outcome demonstrates the 'above' position. While on the one hand children had their interests regarding their favourite digital media activities they wanted to perform, on the other hand, parents thought that the activities the children chose were not so important, and they wanted them to engage in activities that would foster particular skills, most of which were school-related. An example is Ian's case. Ian loved to play Car Racing apps. However, his mother thought he spent too much time on racing cars than on other apps that would help him learn numbers, letters, and animal names. I have already used this example in chapter five as an illustration in one of the social and communicative features of joint media engagement. I now consider it from the perspective of intersubjective positioning. The following is what ensued when Ian's mother sought to direct a joint media engagement activity with him:

Vignette XIII

> Ian asks his mother to give him her phone to play with. His mother, knowing his obsession with Car Racing apps says to him, "promise me you are going to play a letter game. I am not giving you my phone if you are not going to play a letter app. Can I give you the phone, so you can play the letter app?" Ian reluctantly agrees. "Okay, let me open the app for you. If you don't play the letter app, I will take the phone and give it to Silas (pseudonym)", she tells him [Silas is Ian's friend]. "Don't give", Ian interjects. She hands the phone over to Ian. Ian turns away from his mother and sits on his chair. His mother follows him to where he has sat to ensure that he plays the letter app. He intentionally closes the letter app and launches the Car Racing app. His mother tells him where to press for the letter apps. "The letter app is not opening," he reports. His mother continues to insist he opens the letter app. He gets frustrated, throws tantrums as he walks towards the door. He stops throwing tantrums and launches the car game. His mother threatens him that Silas will take the phone. The struggle continues for a few minutes, and they finally agree to play the letter app. His interest is not in the letter app,

so the mother takes a dominant role so that he does not close the app in favour of the car-racing app.

In the above vignette, the mother has taken and maintained the 'above' position while Ian also seems to be assuming the same position. Despite her son's objection to playing the letter app, she insists he should play the app. Although it may have been better for the mother to allow Ian to choose his activity of choice and introduce new lessons within his interests, deciding on what to do in this situation caused difficulty because Ian was passionate about Car Racing apps. Every time I arrived at their home for observations if Ian was home, he was playing either, on the television, or his mother's smartphone. In terms of interests in digital media activities, Marsh et al. (2015) revealed that children quite often resist co-using digital media devices with their parents. Children's resistance to sharing digital media devices could be in response to parents wanting them to engage with activities of no interest to them.

The adoption of the 'above' position by parents in joint media engagement is a legitimate decision, especially in activities that involve advanced metacognitive skills, seen in Rita's mother acting as a skilled partner in the joint media engagement activity of playing a game. By doing so, the mother exposes her daughter to higher order skills that she has not yet mastered (Rogoff et al., 1993). Parents usually attune to their children, and adjust their assistance based on their children's capabilities so as to facilitate or extend those capabilities and efforts (Rogoff, 1990, 1995). However, the child's agency is minimal in the 'above' position compared to situations when the parent is below the child. From a socio-contextual perspective, the mother assuming an above position signifies a power balance in favour of the mother (Bronfenbrenner, 1979). Bronfenbrenner (1979) explains that a power balance in favour of an adult in shared sociocultural activities is an appropriate choice when it supports novices to master turn-taking in interpersonal activities and conversations.

6.3.1.3 The 'primordial we' position.

According to Vygotsky (1998), the concept of 'great-we' denotes a mental commonality between a child and a primary caregiver. The 'primordial we' or the 'great-we' position occurs when a child and the adult experience the world as a single unit (Kravtsova, 2009; Vygotsky, 1998). The 'primordial we' position is a point in the shared sociocultural activity where an adult "actively models to the child's playful interactions, where the child is swept along with the play,

being a part of it, but not necessarily understanding or demonstrating agency in that context" (Fleer, 2015, p. 6). Here, the adult carries the child who is a novice through the shared sociocultural tasks and meanings (Litowitz, 1993).

The 'primordial we' or 'great-we' position was not as common in the data as the 'under', 'above' and 'equal' positions. However, Andrew's case, demonstrates an example of the 'primordial we' position when his mother physically supports him to accomplish the joint media engagement activity of tracing letters when they played the letter app. She provided the support by way of holding her son's fingers, even though his father wanted him to do the activity on his own. The following example shows how the mother physically unites with her son by holding his fingers so that they function as a single unit in carrying out the digital media activity of letter tracing. The following example is drawn from Vignette I reported in chapter five. Remember that vignette I was about physical proximity as a social and communicative feature of joint media engagement. Here I consider the vignette in the light of intersubjective positioning.

Vignette XIV

Father opens a letter app and hands the phone over to Andrew. Andrew figures out that he needs help. He looks up to his father's face and realises he is not paying attention to him because he is talking to a friend. He turns to his mother for help. "Let me help you," his mother tells him as he pulls him closer to her body. She demonstrates on the screen how to trace a letter following the moving finger. She tells him where to start tracing from by pointing the screen. Andrew tries to follow his mother's instruction, but he does not do it well. Through her natural impulse, she notices Andrew's struggle to trace the letter, so she takes hold of his finger to guide his finger movement on the screen. I outline the interaction here:

Andrew: Mum! (he goes up to his mother).

Mother: Come! Let me help you. Do like this. Let me show you.

You've closed the app/game [She taps on the app, and it opens].

Do like this [she demonstrates on the screen].

Bring your finger. [She holds Andrew's index finger. Andrew's father interjects by saying" leave him alone". She leaves his finger].

Do like this [demonstrates on the screen. She holds Andrew's index finger again and helps him draw the curved part of the letter 'A' and praises him for his efforts].

Start from here [holds his index finger again].

In joint media engagement, the close physical proximity of bodies easily facilitates the 'primordial we' position. Some authors argued that physical proximity alone can be described as 'primordial we' (e.g., Fleer, 2015). It would have been difficult for the mother to assume this position if she did not have a close bodily encounter with her son. This form of arrangement of individuals in an activity setting (proximity to one another) facilitates the specific practice of the mother holding the child's hand to guide him in tracing the letters (Leichter et al., 1985). In the above example, the mother is in unity with her son in joint media engagement because she is holding his fingers so that they can trace the letters together as one molar unit. She begins by demonstrating to him how to trace, which is typically an 'above' position. She then points at the specific area on the screen where Andrew should begin his finger movement, but after realising, he is not able to do it alone, she holds his fingers. Who tells her to hold his fingers? Where does the idea of holding her son's fingers originate? One way of explaining this is with reference to psychoanalytic theory (Stern, 1985b; Winnicott, 1965). The idea comes from her attunement to the child's zone of proximal development or potential space, what she perceives to be his immediate needs. In line with Stern's (Stern, 1974a; 1974b; see also Winnicott, 1965, 1971; 1977) analysis, good-enough parents have natural impulses to tune sensitively into children's needs in order to help children accomplish valued sociocultural tasks. If parents fail to attune to their children's needs, there is an increased likelihood that children will be anxious (Bainbridge, 2014; Winnicott, 1964). Naturally, the mother wants her son to accomplish the activity and, if he is unable to do it on his own, she has to step in and offer some assistance. She knows Andrew has not yet developed the fine motor skills needed to control his finger movements. For this reason, the mother holds his fingers and guides the movement. Good-enough parents have innate 'pedagogical impulses' when interacting with young children (Litowitz, 1997), and children are wired to respond to and learn from them (Bronfenbrenner & Ceci, 1994). The mother highly attunes to her son's affect expressivity; in other words, even though she carries

the child through the activity (Litowitz, 1993), the feeling the actions produce is assuring – that 'we have done it.' If these qualities, that is, contingent responsiveness of the mother based on her attunement to the abilities of the child are absent, the potential space for learning is drastically weakened. A weakened potential space may not fully support children's meaning making of using digital media in activities that improve the conditions of their lives. This finding links strongly to the idea of 'affect attunement' (Stern, 1974b; Stern et al., 1985; Winnicott, 1965, 1971a) that I discuss in the next section.

Nevertheless, it is difficult to decide whether to categorise the above example in the 'above' or 'primordial we' positions. The example in vignette XIV suggests there is only a subtle distinction between the 'above' and the 'great-we' positions, at least when it comes to embodied joint media engagement activities with young children. If one were to classify the activity in an intersubjective position based on the level of control, then one would categorise it as the 'above' position because the mother appears to have more control of the activity. I have chosen to categorise it as the 'primordial we' based on the joining of the mother's and Andrew's hand to accomplish a task as a unit. The mother did not entirely do the activity for him; she did the activity together with him. Contrary to Fleer's (2015) assertion that the child may not necessarily demonstrate agency in the activity in the 'primordial we' position, Andrew demonstrated agency in tracing letters by leaning forward to see how his mother traced the letter. Andrew's mother would have altered her positioning if she had told him to look on the screen as she traced the letter, which would have then categorised her taking the 'above' position. I now turn to the 'equal' position as the final intersubjective position in available in joint media engagement.

6.3.1.4 The 'equal' position.

The 'equal' position arises when both the child and the adult make 'more or less' equal contributions to interpersonal interaction of joint activities (Kravtsova, 2009). Fleer (2015) has argued that in an equal position, teachers and children contribute equally to joint play activities. I must recognise that Fleer's (2015) evidence comes from preschool age children, and this most likely makes her definition of the 'equal position' playful pedagogical strategy which may differ from that observed with younger children in homes. If the interpersonal interaction in play activities is subjected to systematic analysis, having in mind the level of each partner's

contribution as a unit of analysis, then I highly doubt if Fleer's argument will stand, especially with younger children where adults have to do more to organise their experiences of joint action. Research about joint attention in the first three months clearly demonstrate that infants do not contribute equally in parent-child interactions. For instance, Schaffer (1992) reports that infants in the early months of life show inability to establish a joint focus on objects based on the orientation of the adults' eye gaze. Although my focus children were older and therefore more proficient in joint attention, parents still had to put in extra effort to orchestrate children's attention to particular aspects of joint media activities. It is for this reason that I have termed the contributions of parents and young children in joint media engagement activities to be 'more or less' equal.

By adopting this position, some parents appeared to work with young children on joint media engagement activities as partners in the co-construction of storylines. Rather than assuming a more dominant 'above' position, they occupied an equal status with the child. I draw an instance demonstrating this situation from Ian's experience with his mother when playing Temple Run app.

Vignette XV

> Ian is seated on a chair at a table playing temple run. His mother wants him to do a different activity but knowing he is going to object to the activity she wants to propose, she decides to join him in playing Temple Run. Ian controls the explorer by swiping left and right, jumping obstacles and rivers. The mother is watching and instructing him to turn right, left, jump obstacles, and so on. At some point, he fails to control the explorer, and he falls in the water. "It is your turn", he tells his mother as he hands the phone over to him. "Oh! You want me to play?" says his mother as she takes the phone. His mother tells him she does not know how to play the game, but he insists it is her turn to play. She restarts the app and starts to play the game. Ian watches and gives instructions by saying "Jump! Jump! Jump!

From this example, we learn that Ian has reached a point in his development where he can participate in digital media engagement games that involve rules. He realises that he must respect game rules and that, once you are out of the game, you have to give way and wait for

your turn. In this situation, digital media engagement enables Ian to learn to takes turns in shared play activities (Pellegrini, 2009). The mother is finely attuned (Stern, 1985b; Trevarthen, 1979; Winnicott, 1965) to her son's interests in the shared experience of digital media engagement and, instead of imposing an activity he may reject she decides to join in her son's favourite digital media activity of playing Temple Run. Another example depicting the equal positioning in joint media engagement comes from Pauline, who played a solitaire card game on her mother's desktop computer.

Vignette XVI

> Pauline is playing Solitaire Card game with her mother. In this game, the sharing of responsibility is quite evident. The mother helps Pauline identify the cards and asks her to drag the cards and drop them on top of the right ones—for example dragging card numbered two and dropping it on top of the one numbered one. The mother points onto a number and asks Pauline, "Which number is this?" Pauline says the number and her mother tells her to drag and drop on top of card number two.

In the above example, the game requires concentration; Pauline must think carefully. She must identify the numbers before she can drag and drop the cards because the cards attach only when correctly arranged in ascending order. Pauline pauses occasionally and intently gazes at the screen as she identifies the numbers before she can take the next move. Brian's instances of joint media engagement with his mother provide the final example of equal positioning.

Vignette XVII

> Brian is sitting on the couch with a tablet on his lap. His mother is seated in front of him. They are listening to nursery rhymes. 'Twinkle Twinkle Little Star' rhyme starts to play, and the mother asks Brian while pointing onto the screen, "What is this, Brian?" Brian is non-responsive. She tells him to say, "Twinkle." As the rhyme begins, Brian gazes to the television. There is a cartoon program showing on television. The mother tells him to look on the tablet while pointing on the tablet's screen. "Sing along", she tells him. "Brian, sing," she continues. She can be seen rising her eyes to look into Brian's face

and then on the screen several times. They both start singing as Brian gazes on the television, his mother's eyes and back onto the tablet's screen again.

Even though I cannot interpret Brian's 'words' because he has not mastered conventional speech, he is correctly following the rhythm of the rhyme. In this case, both the mother and her son are contributing 'more or less' equally in singing the song.

To summarise my argument so far, intersubjective communication can only be possible in joint media engagement if the parent provides facilitating conditions supporting the various intersubjective positions. In a good holding environment, parents and young children assume identifiable positions, and change to other positions, as joint media engagement activities progress. With proper facilitating conditions of the holding environment, young children may learn to model and practice the diversity of intersubjective positions typical of interpersonal interaction and communication in sociocultural activities within their communities. However, how does intersubjective positioning help in learning? Perhaps this is the most critical question to raise regarding the value of intersubjective positioning in joint media engagement. Developmental psychology researchers acknowledge that the human self develops when individuals take positions in contexts of interpersonal interaction and communication (van Langenhove & Harré, 1999), because the variety of different intersubjective positions occupied "enable young children to witness, or be involved in, particular kinds of communication that make explicit aspects of cognition and affect" not possible when children are working on their own (Fleer, 2010, p. 110). Cunha and Salgado (2017) contend that "human beings are relational beings, in a constant dynamic of intersubjective relational processes that constitute the human psyche" (p. 70). To this end, I offer that joint media engagement provides a potential space for the identification and amplification of children's social and communicative competencies dispelling fears about the isolation effects of digital media. The potential space of learning is weakened for example if the parent and the young child are not in close proximity, there is less reciprocal communication taking place, there are competing activities that destructs the child or the parent from mutual visual gaze on the screen and the child and the parent are interested in different digital media activities. I now turn my focus on the second and final psychosocial process of joint media engagement.

6.3.2 Affective attunement in joint media engagement.

I have argued in the previous sections that socio-contextual perspectives on learning are necessary but insufficient for a micro-analytic interpretation of the social and communicative features embedded in joint media engagement of parents and young children. In this study, socio-contextual perspectives allowed me to operationalise joint media engagement by way of identifying the social and communicative aspects that constitute it. However, these perspectives are not enough to explain *how parents support their children* in joint media engagement. In this section, I, therefore, go beyond my *a priori* socio-contextual analytic units to examine what else was 'going on' in the joint media engagement of parents and young children. In my observations and iterative micro-viewing of the video data, I was struck by the level of sensitivity in the way the participants attuned to each other. Joint media engagement was not just about the content of the activities, parents and young children were engaging with on the screen. I identified the embodied aspects of the bodies and the kind of interactions parents and children were having as critical for joint media engagement.

Drawing on ideas of intersubjectivity (Vygotsky, 1978) and embodied interactions (Dourish, 2001), I propose affective attunement as one of the concepts that may be used to theorise the embodied and affective aspects of joint media engagement. The notion of attunement is central to the development of personhood in the early years of life (Rogoff et al., 1993). Socio-contextual perspectives on the development of individuality emphasise the dialectical unity of affect and intellect (Luria & Vygotsky, 1994; Vygotsky, 1962, 1994). Vygotsky (1962, 1994) argued that affect and intellect are a unified process, and his view was that the study of human psyche should consider this dialectical unity of affect and intellect. Vygotsky (1993) states that,

> [t]he affective and intellectual processes together represent a unity, but that is not an immobile and permanent unity. It changes. And the changing relationship between affect and intellect is the very essence of the entire psychological development of the child. (p. 239)

Vygotsky (1978) and other researchers such as Stern (1974a, 1985) and Winnicott (1964/1991) reject the Cartesian dualism of mind and body. Kravtsov and Kravtsova (2009) extended Vygotsky's understanding of the unity of affect and intellect into pedagogical

strategies. In pedagogical practice they suggest, “the principle of unity of affect and intellect could be a theoretical pivot, which permits the union of teaching and upbringing, the private life of the child and the organised activity” (p. 205). Let me consider this from a socioecological perspective. Bronfenbrenner’s (1979) microsystem involves “a pattern of activities, roles, and interpersonal relations experienced by the developing person in a given setting with particular physical and material characteristics” (p. 22). For Bronfenbrenner, the most crucial contributors of learning are the patterns of transactions between the child and the immediate caregivers, in this case, the parents. I understand Bronfenbrenner to be referring to what Stern (1985b) termed ‘affect attunement’ between parents and young children. Affect attunement is the degree to which caregivers can accurately anticipate, ‘read’ and appropriately, respond to a child’s psychical and socioemotional expressions. Thus, the examination of any individual or contextual factors that may support or impede the achievement of affective attunement between parents and young children during joint digital media use should occur because these factors have implications for the learning outcomes of joint media engagement.

Based on the four social and communicative features outlined in the previous chapter — physical proximity, communication exchange, mutual visual gaze, mutual interest in activities— and the intersubjective positioning described in this chapter, I argue that joint media engagement, understood as an interactional loop, connects two corporeal bodies experiencing digital media, in the “same sensory and corporeal space” (Meyer, Streeck, & Jordan, 2017, p. xxi). I contend that affect attunement appears to be a crucial mechanism through which young children learn in the context of joint media engagement with their parents. Joint media engagement activities, just like any other lived experience conducted in the family, are intersubjective, multimodal and highly embodied experiences increasingly grounded in everyday family experiences (Takeuchi & Stevens, 2011). I observed that it was the embodied aspects of parent-child relationships that characterised the instances identified as joint media engagement. Mutuality and reciprocity were high in all the observed families. Parents and children immersed themselves in the experience of joint digital media use sharing both each other’s outer actions and inner states, especially the motivations and emotions related to their shared activities and experiences as mediated by digital media. My interpretation of the dyadic interpersonal interactions with digital media observed is that parents and young children were both attuned to the needs and emotions of the other body engaged in the joint media engagement

experience, particularly so on the parent's part. The embodied proximal dyadic experiences and interactions comprised *embodied intersubjectivity*, and the embodied intersubjective experiences may come to bear not only on children's but also on parent's psychological well-being (Rogoff et al., 1993), given the emotionally loaded parental decisions related to young children's digital media use (Clark, 2011; Clark, 2012a, 2012b).

Attunement appeared important for emotional connection between parents and young children, especially in the families I observed in the evening after parents came home from work. Digital media seemed to play a powerful role in mediating the emotional bond and re-connecting the parent and the child after a daylong temporal separation of the parents and children. My case study observations of young children using digital media jointly with their parents suggest that joint media engagement is more than a text analysis process. Joint media engagement is a multimodal experience of young children involving embodied social and communicative acts experienced in the conduct of everyday life of young children and their families. Joint media engagement is a constitution of complex sociocultural intersubjective ways of acting and being that involve embodied ways of experiencing activities in context. Understanding joint media engagement as a catalyst for learning, therefore, necessitates an examination of sociocultural intersubjective and attunement actions involved in coming to understand the digital environment that young children inhabit in families. Going beyond textual analysis allows for the analysis of social and communicative aspects of joint media engagement, and, how these relate to conventional ways of socialisation, historically instituted in the social life of families. These aspects of the everyday life of young children have received less attention in research about young children's engagement with digital media in homes.

Winnicott (1965) approached the notion of attunement in early mother-child interactions from a psychoanalytic perspective. As noted earlier in this chapter, he was particularly interested in the idea of the 'good-enough mother', who provides a holding environment to facilitate her child's psychological well-being. For Winnicott (1965), good-enough mothers (parents) are those attuned to their children who know how to calibrate that attunement over time so that the children can eventually internalise the attunement to themselves. Just as in Vygotsky's (1978) view of learning being inter-personal first, then later intra-personal through internalisation, the idea of social phenomena existing on the external plane (that is, the

attunement of the parent to the child progressing to being internalised by the child) is also central in Winnicott's (1964) work. I argue this is a particularly valuable insight, because the diverse multimodal ways of interacting and communicating during joint media engagement, which characterise affect attunement, exist on the interpersonal plane, and then proceed to become part of the intrapersonal plane, through continued engagement in ongoing sociocultural activities and interactions mediated by digital media as emerging cultural forms in families and childhood (Rogoff et al., 1993; Stern, 1974a, 1985b; Stern et al., 1985; Vygotsky, 1978, 1994; Winnicott, 1964, 1970, 1971b, 1990). I argue that the foundation for young children to learn how to use digital media to change the conditions of their lives has to be this internalisation or appropriation of early attunement in the context of joint media engagement with their parents. This way, parents prepare their children well for the kind of world in which they will live. As I have already said in chapter one, the life-worlds of young children are increasingly becoming mediatised, and as such, they need to be initiated early in the practices of using digital media including digital literacies (Marsh et al., 2015). The role of socialisation has always been centred around the preparation of children to fit well in the changing society. Because rapid technological changes are the order of modern society (Couldry & Hepp, 2017), it follows that children need to be well prepared for that kind of society.

Winnicott (1971a) and Stern et al. (1985) used several strategies to observe affect attunement in parent-child interpersonal interactions, especially in play. The mother's eye tracking was an important characteristic for both Winnicott and Stern. The idea of eye tracking as an element of affect attunement was evident in this study. As explained in the previous chapter through the social and communicative features evident in joint media engagement, I observed parents looking at the child, looking at the screen of the digital technology, and looking back at the child again, with this interactional loop of eye tracking continuing through the instances of joint media engagement in all eight families. The practice of parents looking into children's faces and at the activities happening on digital technology screens is significant. Without doing so, they would be unable to engage children in 'sustained shared thinking' (Siraj-Blatchford et al., 2006) about the activity going on in joint media engagement resulting in a weak potential space that may not *support* and *extend* children's social and communicative capabilities. The parents' sensitivity to interpret their child's facial expression is critical, in that the practice enables parents to read the feelings of the child and this permits them to modify the

mode of interaction to the level of the child's abilities (McCabe, 2011). Eye gaze also allows them to determine which intersubjective positioning to adopt in order to have a productive guided interaction session.

There is another aspect I observed, which is a likely indicator of affective attunement. Parents' anticipation of children's needs featured strongly in my data (Winnicott, 1970, 1971a). The parent's ability to *notice* the diverse physical and emotional gestures and 'their emphatic ability to respond' in a way that reflects or corresponds to the displayed gesture or cue appeared to promote affective attunement hence a stronger potential space for learning. The parents highly attuned to their children anticipated whether a child would need help or not. For example, Andrew's mother anticipated that Andrew had difficulty tracing letters in the letter app, so she held his finger so that they could trace the letters together. Parents anticipated children's needs because they were alert to verbal and non-verbal communicative cues and appeared to interpret them accurately and respond appropriately. This intuitive sensing of children's current abilities and difficulties may be the most important element that makes joint media engagement a pedagogical space through which young children experience conventional and emerging forms of culture (McCabe, 2011; Winnicott, 1971b). This aspect is particularly critical for Winnicott (1965) because children may become anxious if adults fail to meet their needs. Thus, young children learn in the potential social and communicative space of joint media engagement because this space can contain anxiety and therefore – potentially – the negative influences of media, such as gender stereotypes, violence, and language and cognitive inadequacies and so on (Bainbridge, 2014). These mechanisms for containing anxiety involve the sensitivity of the parents, proximity of bodies, reciprocal communication exchanges, and the diverse intersubjective positioning that exposes young children to diverse ways of acting, being and knowing. In other words, joint media engagement requires parent's sensitivity to *notice* what is going on, sensitivity to make judgments about the kinds of digital media activities that interest the child and, in terms of Kravtsova's (2009) work, sensitivity in deciding what kind of support the child needs to progress towards mastery in the *potential space* of learning. Parents need to be sensitively attuned to children to be able to decide whether they need to support the child entirely, or whether to give support more sensitively, perhaps doing the activity together. The parents' goal at this point is to provide support that corresponds to children's present level of functioning to enable children to move towards independence and mastery; this will then allow

them to use digital media independently in activities that change the conditions of their own development now and in future. This may be possible because they have internalised the capabilities or the potential affordances of digital media as cultural tools. Eventually, as they grow up, children may use these cultural tools in advanced ways because they have achieved new zones of proximal development through joint media engagement with their parents early in life.

The final aspect of affective attunement that I identified as present in my data is the idea of calibration (Stern, 1985b; Winnicott, 1970, 1971a). An example of this characteristic is Andrew's mother holding Andrew's fingers. She could have taken the screen and shown him what to do, or she could have left him to struggle with it himself, but instead, she calibrated enough support for Andrew to achieve his goal without doing it for him. She held his fingers and let him feel in his body the experience of making the letters; then she can withdraw. What this means, in the long run, is that next time he is struggling with the letters she can say "Remember we have done this together before?" then he can do it alone. This calibration also moves from the interpersonal to the intrapersonal plane strongly linking this notion of calibration in joint media engagement to Kravtsova's (2009) work on the 'primordial we' where there is one molar unit—in this case, the mother holding Andrew's fingers. The early inseparability of young children and parents in sociocultural activities is a critical criterion for Winnicott's (1965) understanding psychological well-being. So, if we ask how affect attunement builds a child's psychic structure (Freud, 1937) that would lead to the independent use of digital media, the answer would be found in the careful calibration of parents' activities in the *potential space* (Winnicott, 1971) or in the zone of proximal development (Vygotsky, 1978). Of course, for parents, the act of calibration may be an unconscious one—they are just trying to be 'good-enough' parents. The mother's action of holding the child's hand to guide the movement so that he can trace the letters reflects "the pedagogical work of scaffolding" where the mother notices the struggles of the child and slightly alters her interaction and practice by intentionally holding his hand to scaffold the finger movements (Houen et al., 2017, p. 67). To sum up, affect attunement appeared to rely in the most part on the social and communicative signals displayed by children during joint media engagement. It required parents and children to be in the *potential space* physically and, emotionally, showing interest in the activities, communicating their subjectivities, and paying attention to the activities on-screen.

6.4 Conclusion

This chapter has explored the theorisation of joint media engagement in terms of what the social and communicative features may tell us about the potential of joint media engagement in providing a platform for young children's learning of contemporary society's valued sociocultural practices by using digital media in family interpersonal interactions. We know that digital media literacies are one of the defining characteristics of today's society and children need to be equipped with these literacies so that they can flourish in such a society. This preparation begins in families (Marsh et al., 2015). The central claim I have made is that the social and communicative features instantiated in joint media engagement potentially constitute a 'holding environment.' The holding environment constituted by the social and communicative features creates a *potential space* for identifying and amplifying those practices. However, this may only happen when enabling conditions are available in the *potential space*. The enabling conditions provided through intersubjective positioning and affect attunement, are also dependent on social and communicative features. In this context, social and communicative features present in joint media engagement are not only partial outcomes but also partial producers of the potential space of learning. I have conceptualised joint media engagement as a potential social and communicative space where digital media are recruited as mediational means to enrich the social and communicative competencies of young children. Overall joint media engagement facilitates social interaction and displays young children's understanding/knowledge (Houen et al., 2017). If joint media engagement is conceived from an interactional point of view, I can conclude that it is a pretext for (re)negotiating interpersonal relations in families and constructing new knowledge collectively using digital media as new cultural forms in the contemporary society (Buckingham & Sefton-Green, 2003). When more than one person uses digital media, they are not just consumed but rather, generate activity, interaction and conversation among those involved in their *usage* (Buckingham & Sefton-Green, 2003). In the next chapter, I conclude my thesis by summarising the main claims I have advanced. Consequently, because a higher degree thesis must contribute to the subject matter and the field in general in terms of new knowledge or understanding, I highlight the contribution this thesis makes in research about young children's engagement with digital media in the context of family mediatised relationships.

CHAPTER SEVEN: SUMMARY AND CONCLUSION

7.1 Introduction

This chapter concludes my thesis, which sought to describe and theorise the social and communicative features that characterise joint media engagement of parents and children aged birth-to-three-years in Nairobi County, Kenya. The chapter is organised into four sections. The first section provides a summary of the main claims I have made throughout the thesis against the ongoing debates about research concerning the use of digital media by young children in informal settings. In the second section, I highlight the developmental research process I went through during fieldwork and data analysis and what that process has prepared me for in my future research trajectory. The third section highlights the contribution this thesis makes to the conversation about joint media engagement and its potential for learning in the context of interpersonal relationships in families, and last but certainly not least, I conclude the chapter by offering my final thoughts about researching children's digital media experiences as new cultural forms of their time.

7.2 Summary of Claims and Debates about Digital Media and Childhood

In bringing together all the claims I have made, I would like to go back to where I began reflecting on some of the key substantive issues and debates researchers are grappling with (Marsh, 2015) in research, practice and policy about young children's engagement with digital media in 'deeply' mediatised families and societies (Couldry, 2012; Couldry & Hepp, 2017; Krotz & Hepp, 2011). My point of departure was debating the relationship between digital media, families and young children. I acknowledged the fact that the process of both primary and secondary socialisation of young children necessarily implicates digital media with the relationship between digital media, childhood and socialisation explored in depth by sociologists (see e.g., Couldry & Hepp, 2017; Krotz, 2009). Drawing on the social construction of reality (Berger & Luckmann, 1966), Couldry and Hepp (2017) state that primary socialisation takes place in families while secondary socialisation takes place in other institutions outside the family. As children grow, the environment keeps changing as they broaden their participation in other settings outside their families such as schools, peer groups and in the wider community (Bronfenbrenner, 1977, 1979; Vygotsky, 1994). Digital media are increasingly intervening in

the process of socialisation both at primary and secondary levels (Couldry & Hepp, 2017). There is a growing body of research suggesting that in a mediatised society the experiences of young children, particularly play activities, assume digital media forms (Hjarvard, 2004). Indeed, a number of researchers demonstrate that this is the case in early childhood (Buckingham, 2006; Livingstone, 2002, 2014; Livingstone & Helsper, 2008; Marsh, 2005, 2017, 2018; Marsh et al., 2015; Marsh et al., 2016; Plowman, 2013, 2016; Plowman et al., 2010; Plowman & Stephen, 2007; Plowman & Stephen, 2013; Plowman et al., 2010a; Plowman et al., 2010b; Plowman et al., 2012).

The acknowledgment that digital media are intervening more and more in children's experiences today is perhaps one issue where many researchers agree. Where researchers begin to diverge is the nature and direction of digital media influence on learning and well-being of children. Even though the socialisation of young children today occurs with, through and around increasing digital 'media manifolds' or 'media ensembles' in families (Couldry & Hepp, 2017), child development critics continue to push for the limitation of digital media usage by young children based on the argument that the increasing amount of 'screen time' harms children's physical, social, linguistic, emotional, and cognitive growth (Madigan et al., 2019). As recent as this year, the WHO (2019) issued policy guidelines aimed at limiting young children's screen time and urged parents to promote physical activities and traditional play correlating with numerous policy pronouncements which sought to limit screen time for young children made earlier by the American Academy of Pediatrics (1999, 2011, 2013). Earlier policy statements by the American Academy of Pediatrics (2011) urged families not to expose children under two years to screen media. Childhood digital media regulatory bodies assume that by limiting children's screen time, parents will engage in other productive learning activities such as outdoor play and reading books. However, this is not always the case as parent-child outdoor activities have been shrinking over the years. Taken together such policy pronouncements appear to have intensified the already existing public anxieties, or, what researchers have referred to as, 'moral panic', especially among parents in homes saturated with digital media (Lauricella et al., 2017; Lauricella et al., 2015; Pempek & Lauricella, 2017). Unquestionably parents express legitimate concerns based on what professional organisations tell them about the perceived negative effects of digital media on children's physical, social, and psychological well-being. Researchers and policy-making institutions need to acknowledge and accept the

obvious reality that digital media is firmly embedded in post-industrial society, so the best thing we can do for parents is to offer them empirically established ways of using digital media that improve the well-being of their children.

The concerns of those who advance the agenda of limiting screen time derive directly from claims of 'media effects' research built around what digital media does to young children (Buckingham & Jensen, 2012; Jensen, 2002a). Such thinking reflects a deterministic way of looking at the relationship between digital media and society, which do not recognise the contextual realities of digital media usage by young children. There are also pro-digital media researchers whose work has been concerned with examining the everyday complexities of media usage by children in families particularly for promoting children's multimodal literacies (Marsh, 2017; Marsh et al., 2015; Marsh et al., 2018; Plowman, 2015; Plowman et al., 2008; Plowman & Stephen, 2007; Plowman & Stephen, 2013; Plowman et al., 2010b). Researchers who pursue this line of investigations perceive digital media as emerging cultural forms compellingly powerful in the lives of young children (Buckingham, 2006, 2010; Jenkins, 2006a; Livingstone, 2002, 2014). They argue that the focus on screen time may be unproductive because it may prevent us from examining what children *actually* do with the digital media and the multimodal literacies they gain from these new cultural forms (Arthur, 2005; Buckingham, 2009b; Davidson, 2009; Marsh et al., 2015; Marsh et al., 2018). Among other things, these researchers propose an improvement of the 'social envelope resources' that are critical for realising the promise of digital media use (Giaquinta et al., 1993; Warschauer, 2016) in early childhood (Plowman, 2015; Plowman & Stephen, 2007; Plowman & Stephen, 2013; Plowman et al., 2010a; Plowman et al., 2012). The concept of social envelope resources was unpacked in chapter one (see e.g., Attewell, 2003; Attewell & Battle, 1999; Giaquinta et al., 1993, for detailed analyses). Previous research about the uses of digital technologies in families suggested that weak social envelope resources may work against the promise of digital media (Giacquinta et al., 1993; Warschauer, 2016). In their comprehensive ethnographic study of the uses of educational computers in families, Giacquinta et al. (1993) found out that education media requires strong social envelope resources in families for them to enhance children's learning. Examples of social envelope resources that make digital media powerful learning tools is the scaffolding strategies employed by parents when using digital media together with children (Marsh, 2017; Marsh et al., 2015; Plowman & Stephen, 2013; Warschauer, 2016).

The examination of social envelope resources available in joint media engagement may help us dispel fears about the isolation effects of digital media in relation to young children particularly in the Kenyan context where the children had access to and used digital media in joint parent-child activities. Recent extant research in Australian families revealed that parents engage in joint media engagement most often more than children using digital media by themselves (Huber, Highfield & Kaufman (2019). Even though the isolation effect of media was not an aspect of exploration in this study, it is essential to state that the thesis expressly addresses this limitation in the literature. Though researchers observe the social isolation effect thesis in older children, it may be less prevalent among children aged birth-to-three years especially in most developing countries where a large proportion of children in this age cohort do not own digital media devices. In all the families participating in this study, children used digital media in the contexts of parent-child interactions. Apart from television which was on all the time I visited families for observations (excluding one family where observations took place at the cybercafé); children were not isolated from their parents during digital media use. Instead, digital media provided conversational activities and topics.

In reviewing the literature, I noted that the concept of joint media engagement and the associated social and communicative features are undertheorised in early childhood. What is clear in literature is that parents apply some pedagogical strategies while mediating children's digital media experiences in homes (Marsh et al., 2015; Plowman et al., 2010b; Plowman et al., 2012; Stephen, Stevenson, & Adey, 2013). Researchers have predominantly theorised parents' pedagogical actions from sociocultural perspectives of engaging with the world. However, sociocultural theories do not offer researchers robust analytic concepts that allow them to approach and research embodied forms of learning such as joint media engagement with young children. Learning sciences is a multidisciplinary field and, it is vital to theorise the pedagogy of joint media engagement from diverse perspectives. Building on the work of researchers supporting digital media use by young children and on the current knowledge about joint media engagement, I sought to develop a socio-contextual response, through the theorisation of the social and communicative features of joint media engagement. The socio-contextual approach examines digital media use in specific social and cultural contexts by focusing on what parents and young children *actually* do in ordinary, everyday interactions. In my view, such an understanding may help lessen the public anxieties about the perceived effects of digital media

on young children's learning and may set us on a path toward the development of a new theory of play about young children's engagement with digital media. I combined socio-contextual theories, mainly cultural-historical theory and socioecological theory with other related theories that permit researchers to examine the implications of contextual factors in the use of digital media by young children. Socio-contextual perspectives allowed me to go beyond the content of digital media and examine the embodied social and communicative dimensions involved in joint media engagement.

I acknowledge that all research studies have limitations. What is more important is the contribution a study makes to the understanding of a phenomena, even if it does in a small way. However, some limitations may be peculiar to this study. Most parents who participated in this study had obtained college education but were either not in formal employment or employed in occupations that did not expose them to the use of technology. Only one parent had completed a bachelor's degree. These parental characteristics may have had a bearing on their motivation to engage more actively in mediating the digital media experiences of young children. Furthermore, as observed in research from western countries, the families from low socioeconomic status did not have a wide range of digital media devices (family media ensembles), limiting children's digital media experiences to their parents' smartphones, tablets, and computers in addition to television. Methodologically, the use of a handheld video camera for recording digital media experiences challenged me and did not allow simultaneous note-taking. It was not feasible to put the camera on a tripod because I had to videotape from a close range to capture body movements, including finger movements on the small screens of digital media devices; close confines required that I hold the camera in my hands. Moreover, some families' living rooms where the videotaping took place were small, with dim lighting. Sometimes I could not bring both the child and the parent into the frame of the camera even when standing against the wall. Thus, the quality of the video records was not as good as I had hoped. If I were to conduct this study again, I would still prefer to use video ethnography as a method of data generation, but, I would seek a methodology that effectively uses video cameras to capture the parent-child interactions during the ongoing activity on the small screen of digital media devices, and other ongoing activities in the setting where parents and children are using digital media. Though this is a challenging task, it can be done. In-room interactions around digital technologies have been obtained using multiple cameras to record everything that is

happening in the room (Takeuchi & Stevens, 2011). Nonetheless, I believe the strengths of my thesis having drawn on a variety of disciplines, outweighs the limitations. Moreover, the limitations I have outlined above do not in any way affect the quality and analytic reliability of the study's findings. The limitations reveal that there is need for broader analysis of joint media engagement in families that considers the social and cultural characteristics of families such as class, age, gender, educational level, and residential areas.

7.3 My Development as a Researcher

The research world does not present itself as a neatly organised system. Research is an endeavour requiring one to be reflective and able to make informed decisions along the way as fieldwork and writing develops. The reader might be surprised that though chapters five and six are linked by data, they are somewhat different. The reason for this is that I was stuck in data analysis phase firstly because my first and second research questions were limiting my ability to approach the analysis with an open mind. Secondly, the theoretical perspectives I adopted did not offer me adequate analytic concepts for the analytic interpretation of the embodied aspects of joint parent-child media activities. Faced with the dilemmas of two limiting aspects at that stage in my research, I realised I had to take a different approach. My new approach was adopted in consideration of the remaining time allocated for doctoral training. I felt it was not possible to go back and rewrite my theoretical chapter to factor in new analytical concepts for data analysis and interpretation.

In between writing my findings (chapter five) and discussion (chapter six), I made a risky but bold move by asking myself the question *so what about the social and communicative features of joint media engagement?* This question led me to chapter six and in developing that chapter I took a tentative and speculative approach because I asserted that I did not have enough data to support my claims—indeed that was not the purpose in mind when in the field. Realising that my research questions and theoretical frameworks did not go far enough in helping me understand the topic by way of theorisation, I took another bold step by contributing to the conversation about joint media engagement, putting a tentative theory out there in the research community for others to test its viability in understanding young children's engagement with, through and around digital media in the context of family relationships.

7.4 Contribution to Knowledge

The primary objective of a doctoral thesis is to offer new understandings or perspectives about a phenomenon. My subject matter is joint media engagement in homes with regard to parents and young children and here I outline what I have contributed through this thesis. The first contribution that this thesis adds to knowledge in the area of young children and digital media is making available empirical evidence of joint media engagement from a developing country. In a review of literature about young children's digital media literacies, Marsh (2015) reported that there is little knowledge about digital media experiences of young children in global south countries and called upon researchers to research these regions. Among other researchers who have begun to study digital media experiences of young children in the developing world such as in China, Taiwan, India (Banaji, 2015; Yen et al., 2018), I took up the challenge to execute this research in an African country, with this thesis being the product of my efforts. To my knowledge, this study is the first to examine joint media engagement of parents and children aged three years and below, in Kenya. It is possible to extend this research across the whole of the African continent. I believe this makes a solid contribution on its own because following publication researchers will obtain an understanding of the nature of children's relationship with digital media in some selected homes in Kenya. Instead of relying on anecdotal reports, researchers will have access to empirical evidence of young children's usage of digital media in selected families in Kenya.

The second contribution the thesis makes to the field of early childhood is making available nuanced understandings of digital media use by young children under the age of three. I stated in the introductory chapter that there is little understanding of young children's engagement with digital media with this shortage most pronounced in developing countries (Marsh, 2015). By choosing to explore the digital media engagement of this age cohort, the thesis made a solid contribution by offering new nuanced theoretical claims about shared media engagement in the content of family relationships. I have made a detour from commonly used socio-contextual theories (sociocultural and ecological systems) and made tentative theorisation of joint media engagement of under threes using psychoanalytical tenets. I suggest that this may be a productive theoretical lens for understanding young children's embodied media experiences with other family members especially with parents.

The third contribution the thesis makes to substantive knowledge is the identification of social and communicative features implicated in joint use of digital media by parents and young children, taking a step further than just analysing digital media texts and modes of joint media engagement (Takeuchi & Stevens, 2011) by way of explicating the conventional as well as emerging features supported by digital media in families. This way of analysis views digital media in positive developmental terms that are in line with socio-contextual understanding, which hold that, digital media as cultural forms that have evolved through the history of human activity, act as mediational means to help people make meaning of their world (Erstad & Wertsch, 2008; Scollon, 1998). Digital media in this context have the potential to support and sometimes amplify everyday experiences of children in families (Erstad & Wertsch, 2008; Scollon, 1998; Vygotsky, 1978; Wertsch, 1991, 1994). In addition, digital media also serves as a context for the evolution of new cultural experiences of young children. Thus, digital media mediates everyday practices of parents and young children as they conduct their lives in families. The digital media activities parents and children engage in are the ones that produce social and cultural learning (Bronfenbrenner, 1992, 1993; Bronfenbrenner & Morris, 1998, 2006). In chapter five, I have systematically described the features of joint media engagement I observed according to the socio-contextual framework and carefully arrived at important conceptualisations in the field. I have offered that the social and communicative features I identified reflect the knowledge that young children have accumulated (Houen et al., 2017) and as such, the *focal concern* of parents when they mediate young children's digital media experiences is to capitalise on those social and communicative competencies as displayed knowledge and *extending* them. Instead of focusing on the content of digital media texts, I suggest that parents concern themselves with the use of digital media content to inform storylines or narratives that amplify children's social and communicative competencies (Erstad & Wertsch, 2008). This is a solid contribution the thesis makes in the field of early childhood because it provides a counterpoint to the extensive derogatory rhetoric around screen media and children aged under three.

The fourth and final contribution that this thesis makes to knowledge is that it provides the research community with a tentative and speculative theory of joint media engagement. The theory of joint media engagement I have offered derived from my emerging definition of joint media engagement which concerned with the social and communicative aspects of shared

parent-child media activities. The definition of joint media engagement in use by researchers concerns itself with the 'doings' as the modes that reflect what two or more people do together while interacting with traditional (e.g., television) or digital media (e.g., tablets, smartphones) (Stevens & Penuel, 2010; Takeuchi & Stevens, 2011). I have attempted to offer a tentative theory for how my emerging definition of joint media engagement may have the potential to create opportunities for learning. In doing this, I have drawn on additional theoretical resources, the 'holding environment' and 'potential space'(Winnicott, 1953, 1960, 1965, 1969, 1971a), affect attunement (Stern, 1974b, 1985b; Stern et al., 1985) and 'intersubjective' positioning (Kravtsova, 2009), to supplement the socio-contextual notions of the 'zone of proximal development,' 'intersubjectivity' (Vygotsky, 1978) and 'role'(Bronfenbrenner, 1977, 1979) respectively, acknowledging that Winnicott's (1965) holding environment and potential space, and Kravtsova's (2009) intersubjective positioning are also contextual constructs. Thus, Winnicott's (1965) psychoanalytic work is complementary to Vygotsky's (1978) cultural-historical understanding of human psychosocial activity.

To be sure, the work of Winnicott and Vygotsky is well established empirically, as they share a common origin. Winnicott (1971a) builds his theoretical ideas around the notion of 'ego' and defence mechanisms for the evolution of a stable *self*, topics that deeply concerned Freud (1937). It is well established that Vygotsky was influenced by Freud (1937) to the extent he projected some Freudian elements in his cultural-historical theory. By drawing on Winnicott's (1965) and Kravtsova's (2009) work to supplement the inadequacies found in socio-contextual theories, I attempted to provide a new perspective for understanding joint media engagement as a broad phenomenon involving going beyond the content of digital media and considering the social and cultural aspects and processes implicated in digital media use in general. Based on my data from parent-child interactions with digital media, I have conceptualised how an embodied pedagogy of joint media engagement may look like in the context of everyday routines and practices of families in homes. This is a solid theoretical contribution to the field of early childhood. I do not imply that what I have offered the field of early childhood is a definitive theory; it can fall or stand when subjected to further theoretical verification in the future. I have provided a tentative theorisation of joint media engagement. I believe that this may be a productive theoretical direction in the analysis of joint media engagement of children in the context of family relationships and experiences. I acknowledge that the concept of

potential space alongside the psychosocial processes of *intersubjective positioning* and *affect attunement* is untested in research about joint media engagement. I have suggested that these concepts may offer potentially fruitful future directions in research about joint media engagement involving parents and young children under three years.

7.5 Continuity and Change in Young Children's Digital Media Experiences

The originality of the present study is based partly on its focus on the Kenyan context of joint parent-child play activities with digital media. I want to return to this point and briefly state some of the continuities and/or change in young children's play activities in relation to previous research conducted in Kenya as well as other countries. I do this by highlighting how the findings of the present study apply beyond the Kenyan context and also touch on some aspects that make the findings distinctive to Kenyan parents and young children. The findings of the present study are consistent with other studies carried out in other locations in Europe, Australia and the United States especially in terms of young children's preferences and the role of parents in mediating digital media experiences of young children. Most of my study's child participants preferred playing game apps than any other activity. Parents of children aged 0-3 in the United Kingdom also reported that playing game apps is the favourite activity for children in this age bracket (O´Connor et al., 2019). In the same study, Swedish and Australian parents reported that 0-3-year-old use digital media mostly to view photos and videos followed by playing game apps. Some children in my study used digital media for similar purposes: watching videos, looking at photos and playing game apps. There is another aspect of the findings consistent with the findings in other regions. My findings showed that parents use a variety of pedagogical strategies in helping children make meaning of digital media. Quite a plethora of previous studies in the West reported the use of pedagogies by parents in shared digital media experiences of young children (see e.g., Marsh et al., 2015; Plowman, 2015; Plowman & Stephen, 2007, 2013). These two aspects suggest that Kenyan parents and young children use digital media in more or less similar ways.

However, there is one aspect which I think makes the findings of the study peculiar to the Kenyan context. This finding concerns the quality of parent-child interactions during joint media engagement. Studies conducted in the West reported high-quality interactions of parents and young children during shared media activities and that these interactions occur most frequently (Huber, Highfield & Kaufman, 2018). Although I did not measure the frequency of

high-quality interactions (also high-quality was not operationalised), my observations suggest few episodes of joint media engagement occurred. Ordinarily, one would expect to find many episodes of joint media engagement in a data corpus of 17 hours but there were very few in the present study. I suggest this has to do with the Kenyan culture in child rearing and socialisation. Early studies about child rearing and socialisation cultures in Kenya by Whiting (1963) and Whiting and Whiting (1975) reported that Kenyan parents were not involved as play partners of their young children; the parents delegated this role to the siblings. Whiting and Whiting studies clearly explain why they observed few episodes of joint media engagement in a large data set of 17 hours as due to parents viewing playing with young children as inappropriate. It would be interesting to compare the quality of interactions in shared media experiences of siblings in the Kenyan context and that of parent-child in the West.

7.6 Further Research Directions

After completing the study, I identified some of the areas of joint media engagement that may require further investigation. The first aspect has to do with the pedagogy of joint media engagement. Previous studies show that parents use pedagogical strategies in joint media engagement (Plowman & Stephen, 2007; Plowman & Stephen, 2013; Plowman et al., 2010b). However, these pedagogical strategies have been identified and analysed from a sociocultural point of view, predominantly based on Rogoff's (1990, 2003) work. I have attempted to push this theorisation further toward an embodied pedagogy of joint media engagement. However, more understanding is required. I think what is needed in future research efforts is to frame joint media engagement as a pedagogic object of study in early childhood, given that digital media is readily accessible to young children. We know much about shared book reading in childhood, especially about its pedagogy and how important the activity is in children's cognitive, emotional and linguistic advancement (Bruner, 1983, 1985, 1995; Bruner, 1978; Ninio & Bruner, 1978). Such a robust understanding is still lacking in research about joint media engagement. I believe if conceptualised well and established empirically, an embodied pedagogy of joint media engagement would likely bridge the *structure/logic* divide of digital media (Buckingham & Sefton-Green, 2003; Krotz, 2009) that concerns the inherent qualities of digital media, that individuals do not have control over, that result in media 'effects' and *agency* providing children with critical tools for using digital media for their own purposes.

The second aspect concerns the affective side of joint media engagement. A number of researchers have concerned themselves with the cognitive and linguistic qualities (Connell et al., 2015; Lauricella et al., 2017; Lauricella et al., 2015; Pempek & Lauricella, 2017) of joint media engagement and neglected the emotional and affective domain (Clark, 2011; Clark, 2012a, 2012b). The affective side of joint media engagement is yet another future direction that research may take. The third and final aspect would be to consider examining the social and communicative aspects of fathers and young children. What sort of digital media activities do fathers and children engage in and how do such activities compare with those of mothers and children? Available empirical evidence suggests that joint media engagement research has focused on mothers and children more than on fathers (Edwards et al., 2015; Yuill & Martin, 2016), illuminating yet another knowledge gap that requires further research. The third area that requires further inquiry is the kinds of engagement different digital media devices or apps generate. In the present study it was not possible to determine the kinds and nature of engagement that different devices and/or apps could produce. I have identified this for future study as it was not the object of this study, but I recognise it as a gap in knowledge that requires filling**.** Finally, after completing the study, it is vital to state how I would want researchers to approach the research focus and methodology in a future study. In refining the research focus, I would like future researchers to examine the embodied aspects of pedagogy of 'good enough' parents from a psychoanalytic point of view. This new focus may provide new insights into young children's media engagement with their parents. In terms of methodological approach, I would like to explore a more appropriate and reliable video ethnography methodology that allows us to see more details absent in previous research. In future research, I would like researchers using multiple cameras to capture all the in-room interactions and contextual factors that may have an impact on the quality of joint media engagement. However, the presence of researchers in homes is likely to be an influencing factor on the quality of joint media engagement. How can we record parent-child interactions using multiple cameras while not physically in the research settings? Perhaps, parents may be our research partners in this endeavour.

7.7 Final Reflections

The main thrust of this thesis was the interactive side of using digital media in the context of interpersonal interactions and communication in families. It concerned itself with examining ways in which young children gain knowledge by interacting with people and material resources in their surrounding social and cultural conditions. The thesis was anchored on theoretical traditions that emphasise the importance of the social and cultural contexts of digital media use (Lauricella, Blackwell, & Wartella, 2017; Leichter et al., 1985; Plowman, 2016). The study conceptualises joint media engagement as intertwined in the everyday routines and practices of interpersonal systems in which digital media ensembles are embedded (Couldry & Hepp, 2017; Leichter et al., 1985; Marsh et al., 2015; Plowman, 2016). In such interpersonal systems, for example, families where the everyday events, routines, and activities become increasingly dependent on digital media, joint engagement between parents and children is necessarily understood as an overall part of family life. This orientation alerts us to the idea that we need to pay attention to the interactions that occur between parents and young children to be able to obtain a better understanding of the impact of exposing young children to digital media.

The uptake of digital media in families has exponentially increased in the last three decades (Lauricella, Blackwell, & Wartella, 2017). This trend has resulted in what has been described as ensembles of media in families (Couldry & Hepp, 2017) enabling digital media content to be distributed on multiple media devices (Jenkins, 2006a). Because material conditions shape the learning and socialisation practices in families, digital media intervene more and more, in fundamental ways, in every aspect of human social life (Waldmann & Sullivan, 2019). Today, it is not possible to talk about young children's everyday activities and experiences without referring to digital media (Arthur, 2005; Couldry & Hepp, 2017; Marsh, 2018). The implication of this trend is that childhood and family life have become mediatised phenomena (Couldry & Hepp, 2017; Hjarvard, 2008a, 2013, 2018; Krotz, 2009, 2011; Livingstone, 2009b, 2014). In mediatised families and childhood, digital media create new material conditions or new cultural forms that enable established conventional practices of socialisation and learning to take place while allowing new ones to emerge (Waldmann & Sullivan, 2019). Merchant (2015) observed that conventional routines and practices determine

how digital media are used by children in families. In turn, digital media transform the social and communicative features that emerge as a result of using these technologies (Daniels, 2017).

Joint media engagement, conceptualised through the prism of mediatisation of family life, should be considered as a phenomenon that occurs in the everyday routines and practices of families; by necessity then it has to be conceptualised and studied as such. This is mainly because digital media in the contemporary world entangles itself in family practices (Hepp & Hasebrink, 2018). Joint media engagement conceptualised as part of everyday events and activities may be understood by analysing the actual patterns of parent-child interactions mediated by digital media as new cultural forms of post-industrial life. In such a context, the social and communicative features emerge and are distributed through the material and symbolic resources used in interpersonal interaction and communication between parents and young children. So, the question of whether young children should use digital media in mediatised, participatory society is a troubling one (Couldry & Hepp, 2017; Jenkins, 2006a). The right question to ask would be, "What are the ways in which we can help young children to use digital media so that they improve their life conditions now and in future?" Regulating children's exposure to digital media will diminish their ability to learn multimodal literacies in a mediatised participatory culture. This may in turn limit their ability for academic achievement and active participation in the social, civic and economic sphere of our society. Is this truly what the contemporary society desires?

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Appendices

Appendix I: ACU HREC Ethics Approval Letter to Conduct Research with Children

Dear Applicant,

Principal Investigator: Prof Susan Edwards, A/Prof Joce Nuttall

Student Researcher: Timothy Katiba (HDR Student)

Ethics Register Number: 2017-5H

Project Title: Exploring Converged Joint Media Engagement Modes evident between parents and 0-3-year-old children in four family home settings in Nairobi County, Kenya

Date Approved: 16/05/2017

Ethics Clearance End Date: 31/12/2018

This is to certify that the above application has been reviewed by the Australian Catholic University Human Research Ethics Committee (ACU HREC). The application has been approved for the period given above.

Researchers are responsible for ensuring that all conditions of approval are adhered to, that they seek prior approval for any modifications and that they notify the HREC of any incidents or unexpected issues impacting on participants that arise in the course of their research. Researchers are also responsible for ensuring that they adhere to the requirements of the National Statement on Ethical Conduct in Human Research, the Australian Code for the Responsible Conduct of Research and the University's Code of Conduct.

Any queries relating to this application should be directed to the Ethics Secretariat (res.ethics@acu.edu.au). It is helpful if you quote your ethics approval number in all communications with us.

If you require a formal approval certificate in addition to this email, please respond via reply email and one will be issued.

We wish you every success with your research.

Kind regards,

Kylie Pashley
on behalf of ACU HREC Chair, Dr Nadia Crittenden

Senior Research Ethics Officer | Research Services Office of the Deputy Vice-Chancellor (Research) Australian Catholic University

Appendix II: Research Permit Approval Letter to Conduct Research in Kenya

NATIONAL COMMISSION FOR SCIENCE,
TECHNOLOGY AND INNOVATION

Telephone:+254-20-2213471,
2241349,3310571,2219420
Fax:+254-20-318245,318249
Email:dg@nacosti.go.ke
Website: www.nacosti.go.ke
when replying please quote

9th Floor, Utalii House
Uhuru Highway
P.O. Box 30623-00100
NAIROBI-KENYA

Ref: No.
NACOSTI/P/17/66342/15810

Date:
17th March, 2017

Timothy Chepkwesi Katiba
Australian Catholic University
AUSTRALIA.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on *"Exploring converged joint media engagement modes evident between caregiver and 0-3-year-old children in four family home settings in Nairobi County, Kenya,"* I am pleased to inform you that you have been authorized to undertake research in **Nairobi County** for the period ending **6' March, 2018.**

You are advised to report to **the County Commissioner and the County Director of Education, Nairobi County** before embarking on **the** research project.

On completion of the research, you are expected to submit **two hard** copies **and one soft copy in pdf** of the research report/thesis to our office.

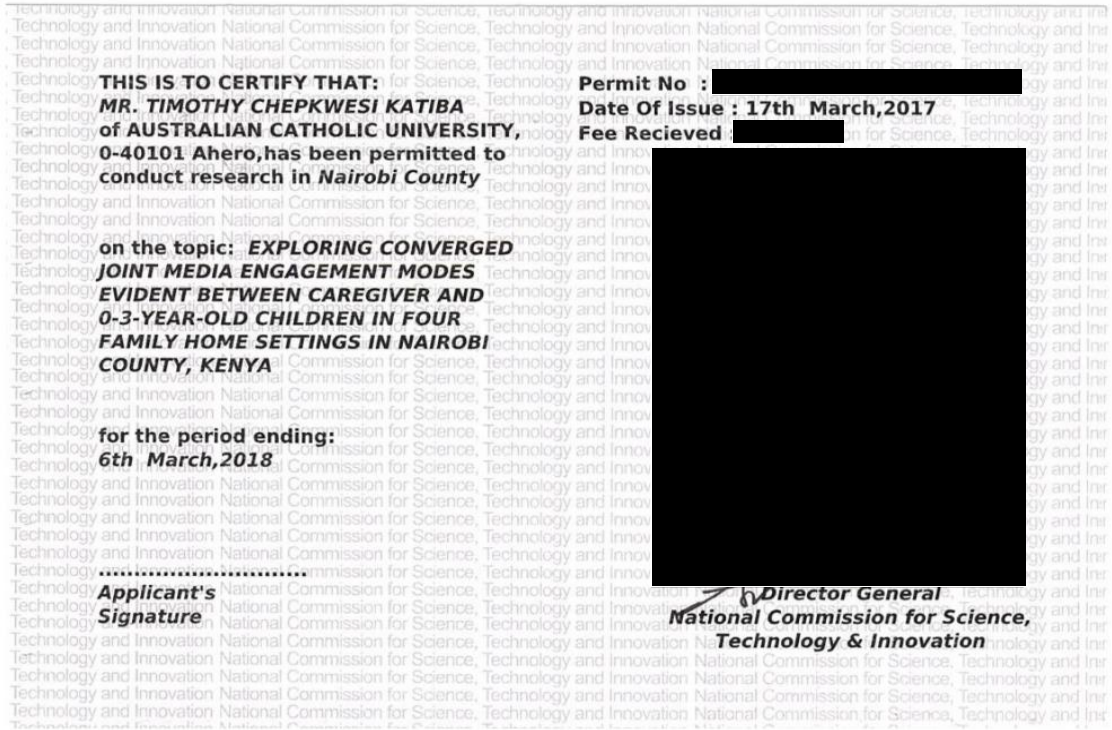
[redacted]

BONIFACE WA AMA
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Nairobi County.

The County Director of Education
Nairobi County.



THIS IS TO CERTIFY THAT:
MR. TIMOTHY CHEPKWESI KATIBA
of AUSTRALIAN CATHOLIC UNIVERSITY,
0-40101 Ahero,has been permitted to
conduct research in *Nairobi County*

on the topic: *EXPLORING CONVERGED JOINT MEDIA ENGAGEMENT MODES EVIDENT BETWEEN CAREGIVER AND 0-3-YEAR-OLD CHILDREN IN FOUR FAMILY HOME SETTINGS IN NAIROBI COUNTY, KENYA*

for the period ending:
6th March,2018

.....
Applicant's Signature

Permit No :
Date Of Issue : 17th March,2017
Fee Recieved :

Director General
National Commission for Science, Technology & Innovation

Republic of Kenya

STATE DEPARTMENT OF BASIC EDUCATION

Telegrams: "SCHOOLING", Nairobi
Telephone; Nairobi 020 2453699
reenairobi(mail.com
cdenairobiAgmail.com

REGIONAL COORDINATOR OF EDUCATION
NAIROBI REGION
NVAVO HOUSE
P.O. Box 74629 — 00200
NAIROBI

When replying please quote

Ret:RCE/NRB/GEN/VOL.1

DATE: 12th **September, 2017**

Timothy Chepkwesi Katiba
Australia Catholic University
AUSTRALIA

RE: RESEARCH AUTHORIZATION

We are in receipt of a letter from the National Commission for Science, Technology and Innovation regarding research authorization in Nairobi County on **"Exploring converged joint media engagement modes evident between caregiver and 0-3- year-old children in four family home settings in Nairobi County, Kenya"**

This office has no objection and authority is hereby granted for a period ending 6th March, 2018 as indicated in the request letter.

Kindly inform the Sub County Director of Education of the Sub County you intend to visit.

[redacted]

12 SEP 2017

JAMES KIMOTHO
FOR: REGIONAL COORDINATOR OF EDUCATION
NAIROBI

Director General/CEO
Nation Commission for Science, Technology and Innovation
NAIROBI

Appendix III: Project Advertisement

Learning Sciences Institute Australia

ACU
AUSTRALIAN CATHOLIC UNIVERSITY

Are you a parent who is interested in understanding how your child uses digital technology at home?

Hi, my name is Timothy Katiba. I am a Kenyan national studying a PhD in early childhood education at Australian Catholic University in Australia.

I am interested in knowing how birth-3-year-old children use digital technologies with their parents at home.

I am looking for four families with birth-3-year-old children to participate in my study.

Research is always voluntary!

Would the study be a good fit for me?

This study might be a good fit for you if:

- You are a parent.
- You have a birth-3-year-old child.
- Your child has access to and uses digital technologies at home.
- You reside in Nairobi County.

What would happen if I took part in the study?

If you decide to take part in the research, you would:

- Be filmed in six visits with your child using digital technology together.

The possible benefits for participating in this study are:

- You will reflect on how your child uses digital technology in ways that promote learning.
- The results from this study will help us guide other parents on how to use technology at home to help children learn.

If you are interested in participating in this study, please contact me at timothy.katiba@myacu.edu.au for more information.

Learning Sciences Institute Australia
Brisbane Campus, Cathedral House, Level 4, 22
GPO Box 2587, Brisbane, QLD 4001
T: +61 (0)7 3623 7858 E: lsia@acu.edu.au W: l

Appendix IV: Explanatory Information Letters for Parents

Learning Sciences Institute Australia

ACU AUSTRALIAN CATHOLIC UNIVERSITY

A

PARTICIPANT INFORMATION LETTER
For parents

TITLE OF PROJECT: **Birth-3-year-olds' use of digital media in family homes in Nairobi County**

CHIEF INVESTIGATORS:	PROF. SUSAN EDWARDS PROF. JOCELYN NUTTALL
HDR RESEARCHER:	TIMOTHY KATIBA

Dear Parent,

I am inviting you and your birth-3-year-old child to participate in the project described below.

What is the project about?

This research project investigates how parents and children use digital media together at home. I am interested in examining what actually happens when parents and young children (birth-3) use digital media together. This project is important because children's access to and use of digital media is increasing in family homes in Kenya, yet we do not know how families are utilizing the opportunities presented by these devices to promote children's learning. The findings of this study may be useful in enhancing quality in early childhood education especially with regard to adoption and use of digital media both at home and in preschools.

Who is undertaking the project?

This project is being conducted by Timothy Chepkwesi Katiba for the award of the degree of Doctor of Philosophy at Australian Catholic University. It is conducted under the supervision of Professor Susan Edwards and Professor Jocelyn Nuttall. I am a Kenyan national studying overseas in Australia.

What are the qualifications of the researchers?

1. **Professor Susan Edwards - Principal Investigator**

Professor Susan Edwards has a PhD in early childhood education. She has previously done research with young children and their families to understand digital play in the family home. She has an extensive publication record in this area. Susan is currently the principal investigator in the 'New Play Pedagogies' project. This PhD project is part of the 'New Play Pedagogies' project.

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Brisbane Campus, Cathedral House, Level 4, 229 Elizabeth Street, Brisbane, Qld, 4000
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2. **Professor Jocelyn Nuttall – Co-investigator**

Professor Jocelyn Nuttall has a PhD in early childhood education. She researches professional learning in early childhood education. She has published a lot about initial and continuing teacher education and teacher's work in early childhood education. Jocelyn is a co-investigator in the 'New Play Pedagogies' project.

3. **Timothy C. Katiba – HDR researcher**

Timothy completed a Bachelors degree in early childhood education at Kenyatta University in 2011. He has a Masters degree in early childhood education, and he has worked in early years settings in Kenya. In his Masters thesis, he studied science learning during outdoor play in nature kindergartens in Norway. He is currently studying this PhD that investigates birth-3-year-olds' use of digital media at home with their parents.

Are there any risks associated with participating in this project?

There are no foreseeable risks other than those related to confidentiality and privacy. This project uses videos of young children and parents using digital media together. I cannot guarantee 100% confidentiality of the videos but here are the steps I will use so that your identities are protected:

a) I will invite you to select pseudonyms for yourself and your child to be used in thesis, publications and conference presentations instead of your real names.
b) With your permission, video data may be used in conference presentations and publications. I will not use any of the actual videos and still images without your permission, and,
c) I will use photo converters to convert still photographs into sketch images so that you and your child are not identified in publications and presentations.

All transcripts and video data will be stored safely on password protected work laptop and external hard drive for a period of five years as stipulated by research data retention protocols. Thereafter, all data will be permanently deleted from the work laptop and external hard drive.

What will I be asked to do?

You and your child will be requested to participate in one activity over a period of six weeks. This activity will involve filming. I will invite you to let me know a time to visit in which you will typically use digital media with your child. During this time, I will visit you for an hour in which I will film any digital media activities you undertake with your child. This will happen on six occasions over a period of six weeks.

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What are the benefits of the research project?

As a participant, you will directly benefit from the project in two ways. The most important one is that you will have the opportunity to reflect on how you are using digital media to promote children's learning. I will also give you copies of the video clips of your child. Your child will benefit because through the reflection, you will be able to improve on the way you use digital media in a way that will make your child benefit from digital media in terms of his/her own learning. The project is also beneficial to the wider society because the findings may be used to improve the quality of early childhood education in Kenya.

Can I withdraw from the study?

Participation in this study is completely voluntary. You are not under any obligation to participate. If you agree to participate, you can withdraw from the study at any time without adverse consequences.

What will happen to the collected data after I withdraw?

I will to use data from participants who will participate until the end of the project and allow me to use their data. If for one reason or another you decide to withdraw, I will destroy all data collected.

How long will the data be stored?

The research data retention protocols demand that data be stored for 5 years. I will retain collected data for 5 years to meet this condition after which I will destroy all data. I will not use collected data for future studies.

Will anyone else know the results of the project?

I take your privacy and confidentiality of data seriously. The findings of this study will be used for academic purpose. The study is not meant to evaluate your family routines. All video data and transcripts will be stored on my work laptop which is securely protected by a unique password know to me only. The data will be accessed by my supervisors for the purpose of supervision only. You will not be identified in the publications and conference publications because I will only use the pseudonyms that you will chose for yourself and your child. I will only use the videos if you give allow me to use them. The study will be published as a thesis which will be available online at Australian Catholic University library. Journal publications will also be published in online journals.

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Will I be able to find out the results of the project?

You will receive a letter from me thanking you for participating. I will also send you the abstract (summary) of my thesis once I have finished. If you will be interested in knowing more about the research, you may contact me and I will send you a full pdf file of my thesis.

Who do I contact if I have questions about the project?

If you have any question about the project, don't hesitate to contact me as a PhD researcher at timothy.katiba@myacu.edu.au. Alternatively, you can contact my supervisor Professor Susan Edwards at Suzy.Edwards@acu.edu.au.

What if I have a complaint or any concerns?

The study has been reviewed overseas by the Human Research Ethics Committee at Australian Catholic University in Australia. Locally, I have been issued with a research permit by the National Commission for Science, Technology, and Innovation (Permit no. NACOSTI/P/17/66342/15810). If you have any complaints or concerns about the conduct of the project, you may write to the General Director for NACOSTI through the following address:

General Director,
National Commission for Science, Technology and Innovation
8th - 9th Floor, Utalii House
off Uhuru Highway, Nairobi
P. O. Box 30623, 00100
Nairobi, Kenya

Ph.: +254 713 788 787

Email: **info@nacosti.go.ke**

Your complaint or concern will be handled in confidence and the director will communicate the outcome directly to you.

I want to participate how do I sign up?

If you are interested to participate in this study, please contact me at timothy.katiba@myacu.edu.au and I will send you consent forms.

Yours Sincerely

Signature

Timothy Chepkwesi Katiba

Appendix V: Parent Consent Forms, Followed by Child Assent Forms

Learning Sciences Institute Australia

ACU AUSTRALIAN CATHOLIC UNIVERSITY

B

PARENT CONSENT
Copy for Parent to Keep

TITLE OF PROJECT: Birth-3-year-olds' use of digital media in family homes in Nairobi County

PRINCIPAL SUPERVISOR: Professor Susan Edwards

STUDENT RESEARCHER: Timothy Chepkwesi Katiba

I..... *(the participant)* have read (*or, where appropriate, have had read to me)* and understood the information provided in the Information Letter to Participants. Any questions I have asked have been answered to my satisfaction. I agree to participate in this study over the course of six weeks, realising that I can withdraw my consent at any time without consequences. I agree that research data collected for the study may be published or may be provided to other researchers in a form that does not identify me in any way. I understand that by agreeing to participate in this project I will:

- ☐ Be filmed by the researcher with my child using digital media for up to one hour per day over the course of six weeks
- ☐ Allow the student researcher to use videos and still images that do not identify me.

Please tick (✓) if you agree or cross (X) if you don't agree

NAME OF PARTICIPANT……

SIGNATURE……DATE.....

SIGNATURE OF PRINCIPAL SUPERVISOR…….

DATE……..

SIGNATURE OF STUDENT RESEARCHER……..

DATE.....

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C

PARENT CONSENT FORM
Copy for Researcher

TITLE OF PROJECT: Birth-3-year-olds' use of digital media in family homes in Nairobi County

PRINCIPAL SUPERVISOR: Professor Susan Edwards

STUDENT RESEARCHER: Timothy Chepkwesi Katiba

I..... *(the participant)* have read (*or, where appropriate, have had read to me)* and understood the information provided in the Information Letter to Participants. Any questions I have asked have been answered to my satisfaction. I agree to participate in this study over the course of six weeks, realising that I can withdraw my consent at any time without consequences. I agree that research data collected for the study may be published or may be provided to other researchers in a form that does not identify me in any way. I understand that by agreeing to participate in this project I will:

- ☐ Be filmed by the researcher with my child using digital media for up to one hour per day over the course of six weeks
- ☐ Allow the student researcher to use videos and still images that do not identify me.

Please tick (✓) if you agree or cross (X) if you don't agree.

NAME OF PARTICIPANT……

SIGNATURE……DATE.....

SIGNATURE OF PRINCIPAL SUPERVISOR…….

DATE……..

SIGNATURE OF STUDENT RESEARCHER……..

DATE.....

Learning Sciences Institute Australia
Brisbane Campus, Cathedral House, Level 4, 229 Elizabeth Street, Brisbane, Qld, 4000
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D

PARENT CONSENT FOR CHILD

Copy for Parent to Keep

TITLE OF PROJECT: Birth-3-year-olds' use of digital media in family homes in Nairobi County

PRINCIPAL SUPERVISOR: Professor Susan Edwards

STUDENT RESEARCHER: Timothy Chepkwesi Katiba

I..... (*the parent/guardian*) have read (*or, where appropriate*, have had read to me) and understood the information provided in the Letter to the Participants. Any questions I have asked have been answered to my satisfaction. I agree that my child, nominated below, may participate in this study over the course of six weeks, realising that I can withdraw my consent at any time without any consequences. I agree that research data collected for the study may be published or may be provided to other researchers in a form that does not identify my child in any way.

As a parent, I agree for my child to:

- ☐ Be videoed by the researcher.
- ☐ Allow the student researcher to use videos and still images that do not idengtify my child in any way.

Please tick (✓) if you agree or cross (X) if you don't agree.

NAME OF PARENT …….....

SIGNATURURE……DATE……...

NAME OF CHILD……..

SIGNATURE OF PRINCIPAL SUPERVISOR…….

DATE……..

SIGNATURE OF STUDENT RESEARCHER……..

DATE……..

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E

PARENT CONSENT FOR CHILD

Copy for Researcher

TITLE OF PROJECT: Birth-3-year-olds' use of digital media in family homes in Nairobi County

PRINCIPAL SUPERVISOR: Professor Susan Edwards

STUDENT RESEARCHER: Timothy Chepkwesi Katiba

I..... (*the parent/guardian*) have read (*or, where appropriate*, have had read to me) and understood the information provided in the Letter to the Participants. Any questions I have asked have been answered to my satisfaction. I agree that my child, nominated below, may participate in this study over the course of six weeks, realising that I can withdraw my consent at any time without any consequences. I agree that research data collected for the study may be published or may be provided to other researchers in a form that does not identify my child in any way.

As a parent, I agree for my child to:

- ☐ Be videoed by the researcher.
- ☐ Allow the student researcher to use videos and still images that do not idengtify my child in any way.

Please tick (✓) if you agree or cross (X) if you don't agree.

NAME OF PARENT……...

SIGNATURURE……DATE……..

NAME OF CHILD…….

SIGNATURE OF PRINCIPAL SUPERVISOR……

DATE…….

SIGNATURE OF STUDENT RESEARCHER……

DATE……

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Learning Sciences Institute Australia

ACU AUSTRALIAN CATHOLIC UNIVERSITY

F

ASSENT OF BIRTH-3-YEAR-OLD CHILD

I am Tim

I am writing a book about children and parents playing with technologies together.

I am asking if I can video you while you are playing with technologies with your Mum/Dad

You can choose if you want to be videoed.

Please circle the happy face if you agree or cross sad face if you do not want to.

SIGNATURE OF PRINCIPAL SUPERVISOR……..

DATE……...

SIGNATURE OF STUDENT RESEARCHER……...

DATE……...

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Appendix VI: Sample Coding Transcript

Extract 1

Participants: Mum (M) and Pauline (P)

09		((P opens the laptop))
10		((P turns her head to look at the recording camera)).
11	M	OK, press that button
12		((P turns her head to face the laptop and presses the button with the right inc finger))
13		((P rests her right arm on the counter))
14		(2.0)
15.		((A man stands at the doors clapping hands and talking to M)).
16		() ((P looks at the man)).
17		(4.0)
18	P	↑Mama look, #he is ha::ppy#
19		((P stands upon on her feet))
20		((M tells P to sit down because she is talking to the teacher))
21	M	What is the man doing?
22		He is happy
23		((P laughs))
24	P	Yes he is happy
25		((M inserts the passcode to the laptop))
26		((M points to the screen of the laptop and tells P to open a folder))
27	P	This one? ((points at one of the folders))
28		((P clicks mouse with right hand to open the folder))
29		()
30		(4.0)
31		((M leans close to P while pointing on the screen))
32		((Angry bird show opens and starts to play))
33	M	Do you like the show?
34		((M Adjusts P on her chair so she can sit properly))
35	M	What do you see?
36	P	Fish
37	M	Which one do you like?
38	P	Ah::
39		((P gazing her eyes on the screen of the laptop))

40	M	The big one?
41		((P shakes her head and says no))
42	M	Ah!
43	P	↓The small one
44	M	Aha! ((nodding her head))
45		((P points at the small fish she likes on the screen))
46		((M asks P who will eat the fish))
47	M	Show me the small fish
48	P	Small fish?
49		(.)
50		((P stretches her hand pointing the small fish on the screen))
51	P	I like showers
52	M	What is the small fish saying?
53	P	I like showers

Conventions for transcription adapted from Jefferson (2004)

::	Colons indicate prolongation of sounds
#phrase#	Indicates a smiley voice
(.)	Indicates a micropause in microseconds
()	Indicates something is being said but cannot be understood
(( ))	Indicates the transcriber's descriptions of what is going on
↓↑	Up and down arrows indicate a sharp rise/fall in pitch
(0.0)	Indicates silence in seconds.